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Contained in the guide is information on the basic skills to be included in any instructional program in reading, on the development of a guided program for individual and personal reading, and on the evaluation of a reading program. The objective is to help each child become as efficient and diversified a reader as his abilities permit. No lesson plans or lists of activities are given. Rather, the emphasis is on the understanding of the skills to be taught and various ways in which they can be built.

Vocabulary skills necessary to master in a reading program are word recognition, word analysis, phonics (the ability to associate letters and groups of letters with the sounds they represent and to synthesize the sounds into words), structural analysis (the attempt to find in an unknown word known structural elements that can help derive meaning), dictionary skills, and pronuciation ability. The comprehension skills of understanding, interpreting, and appreciating should also be developed. The study skills emphasized are locating information to be read, reading pictorial materials, organizing material read for recall, and adapting techniques to situations specific to each content field. The place of oral reading skills in the instructional program, in audience situations, and in the content fields is described. Throughout the chapter the reader is referred to other publications for specific teaching methods and materials.

In addition to teaching the basic skills, teachers should help their pupils develop the habit of personal and individual reading. If the proper reading materials and planned reading experiences are chosen from current materials, classics, trade books, and informational books, a lifelong habit of discriminating reading will be established.

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The Teaching of Reading

It would be difficult to overstate the case for the best possible teaching of reading in every classroom.

A child who has been "well taught" in reading will find himself able to employ his full potential in school and in life.

A teacher who masters the difficult and complex art of teaching children to read well will find honor in the profession and new and rich satisfactions in the power thus acquired.

In this document lies much wisdom acquired by successful teachers of reading over the years.

May every teacher in the elementary schools seek and find this wisdom--and put it to work in behalf of children--to the end that reading, the key to excellence in education, will be taught effectively, and that the potential of each child for a sound education may be realized.

Walter Crewson
Associate Commissioner for
Elementary, Secondary
and Adult Education

October 1963

The Teaching of Reading

by
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Bureau of Elementary
Curriculum Development

The University of the State of New York

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Foreword

The purpose of this publication is to provide teachers and administrators of the elementary schools of New York State with some guidelines to assist in establishing increasingly efficient programs for reading instruction. The components are identified in terms of reasonable expectations for children during the present decade. The guide has been planned as a synthesis of the best that is known about the teaching of reading, based on current theories of language, learning, and psychology as successfully used by teachers in actual school situations. This guide is not intended to be a manual, a day-by-day lesson plan, nor is it a list of "how-to-do-it" activities.

In the United States today, all the children of all the people are taught the complex art of reading. For the first time in history, universal literacy is accepted as an attainable and desirable objective. It is a goal teachers have accepted with dedication and the public with optimism, albeit with some impatience when results are not attained at the level or speed deemed desirable. Teachers of reading have always sought materials, devices, and procedures that would increase their skill and efficiency. Today the choices are greater than ever; mechanical, programed and electronic devices, do-it-yourself schemes, complicated administrative structures—all make their impact on education in general and reading specifically.

To help teachers and administrators make wiser choices and plan increasingly successful programs, this guidebook has been prepared. For those who are trained and experienced in the teaching of reading, it can serve as a framework against which to evaluate present practice and as a rationale for making decisions regarding change. Those teachers with less background, those new to the teaching field, and those whose technical knowledge of the reading process is somewhat limited will find much of the basic information included (part I, particularly) helpful in planning a systematic, well-balanced instructional program.

The handbook should serve as a basis for profitable discussion and in-service study, as administrators, supervisors, and teachers work together in planning programs designed to meet the needs of children in local schools and districts. The Department recommends no one set of materials, no one administrative device, no one technique or classroom procedure, no one method that will guarantee success for all children in all situations. Local schools and individual teachers will need to draw from the best that is known and is being discovered about the reading process, about children and how they learn, about developments that facilitate learning. New media and materials, procedures, and techniques are constantly being developed and made available for classroom use. Wise decisions with regard to their adoption and use can be made only when the needs of children and the fundamentals of the learning process are kept in mind. It is hoped that the material in this handbook will aid educators in the elementary schools of the State to build ever more effective programs that will provide for all our children the opportunity to attain maximum success in the difficult and complex task of learning to be competent mature readers.

The Bureau of Elementary Curriculum Development is greatly indebted to Dr. Helen L. Wardeberg, Professor of Elementary Education, Cornell University, who prepared this bulletin, and to Dr. C. W. Hunnicutt, Professor of Education, Syracuse University, who did much of the final editing.

ROBERT H. JOHNSTONE
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Introduction

A POINT OF VIEW

Reading and Language

For the child growing up in the modern American culture, learning to read is a normal part of language development. Most children learn to read their mother tongue. the language that they have heard since babyhood and in which they already have considerable facility. The child learns his language first as a listener and a speaker. When he comes to school, he has an extensive listening and speaking vocabulary; he has a good command of the language structure and considerable flexibility in its use. Influenced by radio and television as no preceding generation has been, the pupil in the elementary school of today has an acquaintance with a range of topics, people, facts, and events beyond the scope of many broadly educated, well traveled adults of a century ago. He has an extensive ear-literacy obtained by simultaneously hearing and seeing the vast array of topics portrayed on the television screen or through the other mass media. For the most part, however, he has not seen the equivalent words. His task in school is to learn to use the printed symbols by which this spoken language is recorded. Learning to read is learning to associate known and understood oral language with the symbols appearing in written form. Written language is by its nature an abstract and generalized variety of language. The printed symbols rarely represent precisely the unique language he hears and speaks socially, nor do they necessarily follow regular, systematic patterns.

Reading is basically the process of obtaining from the printed page ideas and information equivalent to that otherwise obtained by listening to someone talk. Reading is essentially communicating with the author, getting the *sense* of the language that was recorded by a person often unknown and unrecognized in place or time.

Just as the young child spends time and energy in becoming skilled in the use of language, so the school child must spend much time and energy in practicing the skills essential to an efficient reader. It is estimated that at age 4, children produce something like 400 words an hour in running oral discourse; an average 5-year-old probably uses from 10,000 to 15,000 words per day. To develop a somewhat equivalent facility in using the written language, it is likely that comparable practice is needed.

In a sense then, *reading is translating from a written and generally accepted code the thoughts, ideas, and information recorded usually by another person.* In order to receive or decode this communication, the reader must have learned the appropriate symbols and be practiced in their use. The more efficient he becomes, the more accurately he can receive the signals. Thus reading is truly developmental in nature—one probably never reaches the ultimate, or attains perfection in his ability to decode, or receive, or read all that appears in print. Just as any learner profits from instruction that is professionally planned and executed, the pupil learning to read needs instruction based on an analysis of the reading act, coupled with a diagnosis of his own specific needs at ever more complex levels of proficiency.

Reading and the Individual

In contrast to most mass-media processes, reading is an activity one frequently does alone, in silence and solitude. Reading is essentially an individual process; it is a function of the unique experiences, characteristics, and efforts of the individual reader. Hence, effective instruction must take account of the variability among children. Children within any classroom group vary widely with respect to a number of features: ease and speed with which they learn, verbal facility, techniques and media through which they learn most easily, appeal of the various media, degree of interest and satisfaction in reading as a process, general intelligence, physiological characteristics, background, and experience. In any group of children, there will be a wide variation in trait differences, motivational differences, and other individual differences.

This variability among children and the need for group instruction pose one of the major dilemmas each teacher meets in planning a reading program: to provide for each child the advantages of instruction personally fitted to him as an individual, and yet to operate within the structure demands of the classroom group.

A Balanced Program

The reading program in elementary schools should be planned so that proper balance is attained among its many aspects. Much of the prevailing criticism has been based upon programs that emphasized one aspect at the expense of others equally important to the development of competent mature readers.

The first essential in a planned program is a systematic skills development in vocabulary, comprehension, and the study skills. Proficiency in both oral and silent reading should be developed. While the amount of time spent in silent reading increases rapidly throughout the elementary school, oral reading is nonetheless a significant skill that should be maintained with systematic practice.

From the very beginning, each pupil should have the opportunity to use his newly acquired reading skills for his own purposes and personal satisfaction. A mere introduction to poetry and literature as provided in the standard instructional skills program is not sufficient to develop appreciation, taste, and discrimination or to satisfy personal needs. Only as the individual uses his skills beyond the school confines, requirements, and facilities can he become a proficient reader and a literate person. Pupils need guidance in making this transition and in finding appropriate materials for their personal, individual, recreational reading. Time, facilities, and direction should be provided for each child as he develops his own habits and patterns of reading.

Evaluation of each pupil's progress and of the school's over-all achievement in reading is a basic part of a well-balanced reading program. When pupils participate in evaluation and are aware of their own status, problems, and progress, the chances are enhanced for establishing permanent habits of independent reading and learning.

Organizing for Reading Instruction

Organizing the school and the classroom for effective instruction in reading is a problem which faces all teachers and administrators. Differences in children, materials, resources, community demands, school policy, and teachers themselves make it impractical to prescribe a rigid order of sequence or organizational structure. Administrative schemes, both within a school and within each classroom, can provide a structure wherein good instruction takes place. However, the distinction between organizational structure and actual teaching is apparent. The administrative structure can never be substituted for a sound, sequential program of reading instruction, although it can greatly help such a program.

The following recommendations, based on what is known of child psychology, individual differences, and the developmental nature of reading may be of help in making decisions about organizing the classroom for instruction in reading:

1. Instruction in reading should be offered to all pupils at all elementary grade levels. Better results will ensue if instruction for the maintenance and extension of reading skills is continued through the junior and senior high school as well.

2. Specific time should be designated daily for instruction in the basic skills of reading. Throughout the elementary school, each child should spend some time every day working at the specific improvement of his own reading skills, preferably under teacher guidance. The pupil should be aware of why he is doing each task; records of his growth and progress should be kept. In subsequent grades, a few periods per week for formal instruction should suffice, except for those pupils having particular difficulty.

3. Specific time each week should be scheduled for independent reading of material individually selected. This may include time in the school library, but there should also be time in the classroom reserved for personal and recreational reading. It is important that time be definitely scheduled so that children develop in school the habit of setting aside time for independent personally selected reading, and develop the attitude that this is worthwhile and commendable.

4. Carefully selected, graded, and sequential material at levels of difficulty such that each child can profit from instruction should be provided in adequate quantity. Examples include graded basal readers with controlled vocabulary and sequential development of skills. Other resources are available in expendable workbooks or in inexpensive, paperback booklets. Programed content for machines or in books, projected material on films or slides, and other types of mechanical resources have recently become available for use. While they are often designed to present the basic reading skills, care must be taken in selecting such material. It is frequently better to use this material for supplementary practice and motivation than for the basic instruction in reading. In general, the best material for reading instruction is that which is closest in form and format to that in which other reading will be done.

5. Basal materials should be used only for the formal instructional program. They are not intended to be the WHOLE reading program.

Skills developed in the basal materials need to be applied and practiced in other areas of the elementary curriculum: in using reference materials to find answers to the questions curious youngsters normally raise about experiences in and out of school, in using the numerous trade books available for children today, the current newspapers and magazines—in all the avenues where reading is used.

6. Whenever a set of basal material has been selected for instructional purposes, it is desirable that children be given skill instruction in the sequence of development used in the set. Manuals and teaching guides are of help to the teacher in making the best use of the materials. Supplementary aids, such as pictures, workbooks, and flash cards, should be used as needed. Even though skill improvement is the paramount objective of basal materials, the role of meaning and interest should not be ignored. Much basal material is written in story or narrative style. While it is not necessarily intended to be literary in style, it should be interesting and attractive. Its major objectives, however, are to present new skills and provide practice in those skills already learned.

7. The instructional period should be the time to introduce new skills at higher levels than those already attained. It will be a relatively short, intensive period, with the teacher directing the activity, systematically presenting the learning, and providing diagnosis, guidance, and encouragement. At least as much time, and ordinarily more, will then be spent by the children in independent reading activities designed to strengthen the new learning. Children vary considerably in the amount of practice and reinforcement they need to master specific skills.

8. In beginning reading, well-prepared experience charts growing out of the children's own activities are frequently used. These use the vocabulary that is well-known by the children, and often there is high motivation. Where the chart vocabulary has been well selected and taught, the transition to true word recognition or reading is gradual and easy.

9. Quantities of other reading material should supplement basic instructional materials. Just as one learns by doing, one learns to read by reading. Books should be readily available in quantity and variety. Collections of books suitable in difficulty and content should be in each classroom. A much larger collection should be readily accessible in the school library. Basal and supplementary readers were never intended to provide the total reading program. Practice and application, extension and consolidation of skills can be achieved only through the extensive reading that every child should be doing—in trade books, other textbooks, reference books, newspapers, and magazines. Some resources should be relatively easy, so that the pupil can consolidate his skills and increase his speed. Others, however, should be difficult enough to challenge him to stretch and grow in his use of reading tools.

This handbook is divided into three sections that delineate the major aspects of the reading program. In part I, the basic skills are described—vocabulary, comprehension, study skills, and oral reading skills. Part II is concerned with the development of personal reading. Part III deals with evaluation in reading. An appendix includes some of the basic word lists and other information needed by teachers of reading.

Part I

Instructional Program for the Basic Skills in Reading

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Chapter 1

VOCABULARY SKILLS

Word Recognition

The first task in learning to read is to identify words in printed form and to be able to associate the printed symbol with the spoken word which one already knows. When the association is so well established that the word is recognized in any context or even in isolation, it has become part of the reader's sight vocabulary.

There are a number of ways in which the sight vocabulary is built. Sometimes the child hears or is told the name of the word: "This word is *baby*." Many children learn to associate words with printed symbols on television, as the announcer reads aloud words that appear on the screen. Many learn their names, signs, and other words by being told what the word "says" and remembering it. At other times a picture accompanying the word identifies it. A label attached to an object is learned. Days of the week on a calendar, number names, and holidays are other examples of words children often find easy to identify. Many children learn a number of words this way, often without adults being aware of the learning. Some children come to school with a fairly substantial sight vocabulary which they have thus learned. Other children will be unable to identify any printed or written words.

During the initial instruction in reading at school, children are helped to build a sight word vocabulary in these ways and through the use of other, more formal techniques. Selections of the material and the approach to be used in guiding the learning process are crucial decisions. Several common ways for helping children learn include:

1. Seeing a word and being told by someone what the word "says." In the initial stages of reading, this is probably the most common approach. Preschool children interested in words often point to signs, words in newspaper headings, in magazines, on calendars, and so on,

and ask to be told what the word is. The association between the printed symbol and the spoken word is made.

2. Seeing a word used as a label, or with a picture, and recognizing that the word "says" the name of the object. This technique needs careful checking. To one child, a picture may be a "lady"; to others, "woman," or "grandma," or "mamma," or "teacher," etc.

3. Seeing a word, being told what it "says" and tracing or moving over the letter configuration with the finger or an instrument while repeating the word name.

4. Learning the names and/or sounds of individual letters. When seeing a given word, being taught how to voice each letter sound, to blend the sounds together, and to say the word.

Many variations of these approaches are used. Essentially, however, the association must be made between the printed word symbol and the spoken word symbol. Some children find one approach easier, while others prefer another.

Children need help and training in perceiving words as units—and learning to identify these units. Underlining, framing, circling, or "boxing in" are techniques that teachers use to check whether, indeed, a child does "see" the word he "says." Flash cards are sometimes used both for practice and for checking knowledge of words. The teacher must be sure that the child is focusing on the precise printed word to which the teacher refers at the time he says it. Perhaps this method should be called "look-while-you-say-it."

The order and speed with which new words are presented is important. In basal reading textbook series, words known to be found commonly in children's speaking vocabularies are usually presented first. The introduction of new words is systematically controlled, as is the number of repetitions of each new word. This is a minimal program. Children usually read these words many more times in other books, in picture books, in easy story books, on bulletin boards, in chart stories, and the like. Reading materials developed on the basis of phonetic elements use words with common phonograms, sometimes starting with vowels, but more commonly beginning with consonants or with letter families. Sometimes key words are learned; these then become references for a set of similar words. If experience charts form the material for initial instruction, word lists such as those by Dolch, Durrell, Stone, and Thorndike[1] serve as a guide to the teacher in selecting the words most commonly used.

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[1] See appendix, p. 107.

The rate at which new words can be learned varies a great deal among children. Each pupil's rate of learning should be noted and used as a guide in determining the number of new words to be presented to him. Certain words seem more difficult for some children to learn, although there seems to be little or no evidence of variation in inherent difficulty among words.

It is common to forget words once known, especially if repetition is limited and many interferences occur. A particular child, especially in a large class group, may be given too many words to learn and thus be expected to advance faster than he is capable of moving, if he is to have a thorough mastery of this early reading vocabulary. Such inadequate learning produces confusion, and a child may fail to establish a workable sight vocabulary. On the other hand, too much practice and too much delay can cause another pupil to lose interest—a deadly repetition that destroys his enthusiasm for reading.

At each grade level, the teacher should check at least a sampling of each child's sight vocabulary. When moving from one level of a graded reader to the next, each pupil should be tested on his ability to identify orally the words that have already been taught. These words are listed in the back of the reader, often in the workbook, and always in the teacher's manual. In using ungraded materials, the teacher should periodically check a basic word list in either a basal reading series or a standard list, such as Dolch's, to see that the children are experiencing a sound working vocabulary.

Building a sight vocabulary is often considered the province of the kindergarten and first grade teacher. However, every pupil at every grade level should continuously add to his sight vocabulary. As pupils become more mature, they can better analyze their own learning rates and patterns. Some will profit more from auditory association than visual; others may profit primarily from movement and touch sensations.

Teachers' manuals provide numerous suggestions for teaching vocabulary. Several of the books in the bibliography give excellent help in designing suitable activities for this part of the program.

It is particularly important to see that children are mastering the structure words. These are words that provide a grammatical framework or system within which the meanings of the full words (nouns, verbs, adjectives, adverbs) operate. Without a good command of structure words, it is impossible to grasp the meaning and intent of the language.

Structure or pattern-signaling words include connectives, fillers, and articles. For example, the nine one-syllable prepositions showing location, direction, and association are used over and over: *at, by, for, from, in, of, on, to, with*. In addition, *up, down, through, off*, and out occur frequently. Likewise, the one-syllable connectives are most important: *and, as, but, if, or, nor, so, for, then, than, that, though, what, when, where, which, who, why, how*. At more mature levels, the transitional adverbs are basic in developing meaning: *also, furthermore, in addition, however, otherwise, on the other hand*. The pattern fillers include *there* and *it*. The articles are *a, an*, and *the*. Certain verbs known as helpers may serve as structure words: *has, have, is, were, are*.

There are only a limited number of these structure words, but they are basic to the language. One cannot read or speak a sentence without their use. It is easy to check which of them are known by individual children. With growing maturity, readers learn to depend on structure words to point out key ideas, relationships, author intent, and so on.

There is no single technique of learning to recognize words that will be uniformly successful with all children. Nevertheless, the association of the spoken and the written word, essential in learning to read, must be assured. A varied and flexible approach is recommended, one which is based on a systematically derived list of the most useful words and which capitalizes on the learning habits, rates, and potential of individual students.

Recognition vocabulary. While a sight vocabulary is essential in learning to read, there are many words with which a child is familiar but which are not so firmly established that he can always call them automatically at sight. He recognizes these words when given various kinds of clues. Context and expectation are common clues, very useful in identifying words. Children as well as adults frequently meet words more easily recognized in the context and meaning in which they occur, but not familiar enough to be recognized in isolation. (Indeed, the meaning of many words when in isolation cannot be known.) As one reads in a familiar field or about a given topic, one tends to expect that certain words will occur. When a picture appears on a page, it is a helpful clue since the reader develops an "expectancy" for words related to the picture. Expectancy is also used when reading about a given topic, within a specified field, or for a particular purpose.

Some words tend to be used in phrases or groups; for example, prepositions are usually part of a phrase and can be recognized in that context much more easily than in isolation. Pupils who have trouble with of, and off, for instance, may find it much easier to distinguish them in a phrase than in isolation (dived *off* the board; pieces *of* board; the plane took *off*; the pilot *of* the plane).

General configuration of the word, combined with expectancy and context, is another useful clue, helping one to recognize or identify familiar words. Striking characteristics, such as the initial capital, a hyphenated word, or double letters, help some pupils to identify certain words.

Children should be helped to extend their recognition vocabularies and to identify generally reliable clues. Not all children respond to the same clues. Hence, what is a useful clue or configuration for one child may be of no help to another or may even confuse him. Children should be encouraged to describe what helps them to remember a word or words. Practice in recognizing groups of words in phrases or in common expressions is helpful for many children. The word always should be checked against the meaning. Does it "make sense"? The child who says "I don't get it" is indicating a healthy concern for the meaning of words that should be encouraged.

Most adult, mature-level reading is based upon sight and recognition vocabulary. All through the elementary school, pupils will profit from a systematic extension of this vocabulary. Frequent and periodic checks should be made of each individual child's growth. A core of words, known by sight and recognized in context, is fundamental to all the rest of the reading process. Without this sound and comprehensive base, no child (or adult) can be a successful, efficient reader.

Word Analysis

From the beginning of instruction in reading throughout the development of reading skills, attention is directed to the techniques of word analysis. Even before children recognize printed symbols, they should be aware of likenesses and differences in sounds. They should be able to tell whether two words begin or end with the same sound and be able to reproduce these sounds. Young children enjoy the sounds of words; they like to imitate sounds; they are fond of rhymes and onomatopoeia. Training in auditory and visual perception can be a game to the kindergartener and first grader. Careful planning and preparation make such training a series of very useful learning experiences. Auditory acuity differs greatly among children. Some need a great deal of practice in this type of activity; others, very little. Many kindergarten children know the names of the letters in their own names, for instance, and can say the names of letters in words they see. Again, television often provides illustrations known to the children; some commercials rely on oral spelling.

Since the child coming to school frequently has a large listening and speaking vocabulary, the words he knows can be used as a basis for further word study. When he has learned to translate parts of printed words into sounds and can put these sounds together into words he already comprehends from listening and speaking, he has access to a large reservoir of meaningful concepts.

As the sight vocabulary is being developed, systematic reference should be made to the names of letters; *e.g.*, the capital letters in names, the two like letters in a word.

There are many techniques of word analysis. Pupils in the elementary school should have an adequate command of a variety, so they can develop a flexible pattern of analyzing and attacking words they do not recognize immediately. Some children will find one technique more helpful than another. However, no child should be left with only one tool. Many times, combined techniques will be required before a word is satisfactorily identified.

Word-analysis rules and generalizations usually should be developed inductively. For example, a group of three to five words in the known vocabulary which illustrate a principle is analyzed and studied, with pupils being helped to discover and make the generalization or state the principle. ("What is the same in *ball, bat, big, boy?*") This allows pupils to go from known to unknown situations and to develop techniques in contexts already meaningful to them.

Phonics

Phonics has been defined as ". . . any procedure or technique of translating parts (letters, digraphs, etc.) of visible words into sounds and using the sounds to work out the recognition and pronunciation of a word".[2] Phonetics is the scientific study of how the sounds of speech are produced and represented; phonics is essentially an application of phonetics to the teaching of reading at the elementary level. The ability to associate letters and letter combinations with the sounds they consistently represent, and to synthesize these sounds into patterns recognizable as words already known, is a very helpful tool in word analysis. The pupils will learn some words as wholes, without the need for such analysis. However, as a child meets an increasing number of new words, he is greatly helped by the ability to analyze them systematically in terms of sound related to symbol.

There are many systems of phonics, some of which have attained great popularity. Some are relatively unscientific relationships of speech sounds to letter symbols, hastily devised to show some symbol-sound relationships. Linguistic science may eventually make these relations precise. Every reputable basal reading system in the United States recommends a carefully worked out and sequential program of phonetic analysis.

Letter phonics. In some cases, it is difficult to assure a continuity of learning for each individual child. Teachers have not always realized the significance of a given activity in relation to the total phonetic sequence. Therefore, a brief summary of common letter phonics is included here.

These letter phonics may occur in initial, medial, and terminal positions in a word. Sometimes the position within the word changes the sound associated with the symbol; that is, the symbol represents a different sound than it would in another position. Also, particularly with vowels, the position of the syllable within the word and whether it is accented or unaccented will influence the sound of the vowel. Phonemes (the sounds themselves) are difficult to say in isolation. In discussing letter phonics, it is technically incorrect to say "s says sss." Rather, say the beginning sound in "same" is represented by /s/.

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[2] Gates, Arthur I. *The reading teacher*. Vol. 14. No. 4. March 1961. International Reading Association, 5835 Kimbark Avenue, Chicago, Ill. p. 248.

Chart of the Common Letter Phonics

Letter Phonics	*Consonants*	*Vowels*
Single Letter	b, c, d, f, g, h, j, k, l; m, n, p, r, s, t, v, z x, y, w (at beginning of words)	a, e, i, o, u
Blends	bl, cl, fl, gl, pl, sl; br, cr, dr, fr, gr, pr, tr; sc, sk, st, sw, (sn, sp, sm); spl, spr, str, (scr); ng, nk; tw	oi, oy ou, ow (diphthongs)
Digraphs (2 letters—1 sound)	ch, gh, ph, sh, th, wh; ck	ai, au, aw, ay; ee, ea, ei, eu, ew, ey; ie, ue; oa, oe, oo, ow
Silent Letters	(g)n; (k)n; (w)r; p, g(h), (t)ch; (l)k; (l)m; m(b) The second of a pair of doubled consonants is usually silent.	Terminal /e/ is usually mute.

Phonograms. Phonogram is the term used to indicate the ways of representing or of writing the symbols of the sounds. Earlier systems of phonics sometimes put considerable emphasis on homophones; that is, phonograms or letter groups containing varying combinations of consonant-vowel in beginning position with various consonants added (for example, *ca* + *t, n, b,* or *d*) or vowel-consonant combinations in terminal positions with initial consonants varying in the beginning position, as *-at*, preceded by single consonants such as *c, b, f, h,* and/or blends such as *br, fl,* and so on. These are sometimes grouped in phonogram families: beginning families and ending or rhyming families. Often, too much practice has been provided in substituting initial or terminal consonants and in rhyming. It is known that homophones occur only infrequently in written language. Even the 24 most common rhyming elements occur in only a very small part of the words in written language. Therefore, it is recommended that but a small amount of time be spent in practice on phonogram families.

Syllable phonics. The syllable is a unit of speech, the working element of the language. By definition, each syllable contains a vowel sound. A syllable may be a single vowel sound, represented by a single letter such as a. Single consonants, however, are rarely used to represent a speech sound. Even in a word such as "bee," the vowel sound must be included to voice the consonant sound represented by *b*. More accurate sounds can be produced if they are presented in syllables.

If letter phonics have been learned, each letter sound must be blended with others in the syllable to make a speech unit. This is often a laborious process and, for some children, very difficult. Three things are involved in learning phonics and sounding: *first*, knowing what sound corresponds to certain letters under certain circumstances; *second*, the habit of thinking of those sounds when a new word is encountered; and *third*, skill in combining the sounds to get the right word.

Thirteen steps[3] have been identified in learning sounding:

1. Sounds of the single consonants
2. Sounds of the consonant digraphs, *ch*, *sh*, *wh*, *th*, *ck*
3. Consonant blends, *bl*, *br*, *cl*, *dr*, *re*, *st*, *tr*
4. Short sounds of the vowels, *a*, *e*, *i*, *o*, *u*
5. Final e rule for long sound of vowels
6. Double vowels, *ai*, *ay*, *ee*, *ea*, *oa*
7. Diphthongs, *oi*, *oy*, *ou*, *ow*, *eu*, *ew*, *oo*
8. Sounds of vowels with *r*, *ar*, *er*, *ir*, *or*, *ur*
9. Soft c and g before e and *i*
10. Taking off prefixes and suffixes
11. As many syllables as vowel sounds
12. Divide syllables between two consonants or in front of one
13. Open syllables long; closed syllables short

In practical word attack, phonics is helpful when the word being analyzed is in the listening and/or speaking vocabulary of the reader. If the reader has never heard the word, he gains little in either meaning or interpretation by applying the principles of phonics. Phonics, however, may be helpful in pronouncing certain proper names when reading orally or in discussion. In silent reading, this is probably of little advantage, since one ordinarily would refer to the dictionary for the precise pronunciation.

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[3] Dolch, E. W. *Psychology and teaching of reading*. Champaign, Ill. Garrard Press. 1951

Suggestions for Teaching Phonics

a. Phonics instruction requires *oral* participation—phonics cannot be learned silently. It is the association of visual symbols with oral sounds.

b. Skills in blending and in auditory perception and discrimination, as well as tendencies to substitute or transpose letter sounds, need individual diagnosis, instruction, and practice. Always, application should be made to known, then to unknown, words.

c. Use short, intensive periods—1 or 2 minutes for one child, or 4 to 5 minutes for small groups of two to five children. If this is a part of the instructional *reading* program, relate the phonics instruction to the story (words in the story that form a cluster to illustrate the principle). If this instruction is in a separate period, be sure integration is made with reading. Reinforce the skill when children are spelling by helping them see that the purpose is reversed; that now a sound is known, but that possible written symbols to represent it must be selected. When children are writing stories, a phonetic spelling will often be an incorrect one, but it will represent the word and can be edited (or checked) later. This approach saves time and avoids losing the train of thought while writing.

d. Always treat phonics as a tool. Its only purpose is to facilitate reading and spelling. As soon as enough clues are gained to establish the word, the reader should go on.

e. Emphasize left-to-right attack.

f. Formal instruction should decrease rapidly as children progress through the school program. However, periodic checks should be made of all individuals at all grade levels to assure maintenance and facility. Those not progressing as well as expected should be checked individually. The diagnosis should begin with the easiest elements. In some cases, phonetic elements should be retaught to middle- and upper-grade pupils, who for one reason or another failed to develop these skills earlier.

g. Follow a systematic approach so that all letter sounds are included, and so that application is made to syllables. When using basal readers, be sure to follow directions given in the manual for developing phonics skills. Omitting part of the sequence can interfere seriously with the child's mastery of this rather complex tool. When using separate systems, be sure that applications to words are in meaningful context.

Structural Analysis

In contrast to phonics, which depends on oral association, structural analysis requires a visual attack on an unknown word in an attempt to find known structural elements helpful in deriving either meaning or auditory clues. Structural analysis does not necessarily require the "saying" of a word; it does require sufficient interpretation to derive contextual meaning sufficient to recognize the thought. Hence, it is a quicker tool, less laborious, and, at least for mature readers, is probably more commonly used than phonics.

From a structural standpoint, words in English tend to be of three main types: (1) root words with inflectional and derived forms; (2) compound words; and (3) polysyllabic words. Hence, in attacking an unknown word, the reader should have a variety of approaches, depending on the type to be analyzed.

Root words and affixes. Many of the sight words learned early in the program are root words to which inflected endings may be added. Inflection, to distinguish case, gender, number, tense, person, mood, voice, or comparison, is accomplished by the addition of a suffix or by an internal change. For instance, the inflected endings *ed, ing,* and *s* are at a very early time (usually in the preprimer stage) added to verbs such as *look* and *play.* The inflected forms *s* and *es* used to form plurals of nouns and so on are also introduced early. Later, the possessive forms of nouns (*'s*) as well as inflected forms of adjectives (adding the comparative *er* and *est*) are included. Inflectional endings may be added to derived forms and to compound words, as well as to root words.

Inflected forms involving internal rather than ending changes such as *run-ran,* and *man-men* are fairly common in English and should also be taught systematically.

Derivatives are formed from root words by adding a prefix, a suffix, or both, in varying combinations, usually uninflectional in nature. There is an almost infinite number of possible combinations of roots and affixes in the English language. Choices of those most frequently used and hence most profitable to teach elementary school children are difficult to make. On the basis of varying criteria, basal reading series have selected those considered most helpful. While these may differ somewhat from one series to another, certain basic root words tend to be included in all lists. Teachers using a basal series throughout a graded sequence should check not only the given grade but the total sequence. Usually, a chart or list is provided, indicating the grade at which specific roots and affixes are introduced. These will require maintenance and practice. Every opportunity to apply such knowledge in attacking new words should be used.

The five prefixes most commonly included in the elementary school program are: *dis, en, in, re, un.* Four-fifths of all the prefixes occurring in the words of the Thorndike list[4] are accounted for by the following 15:

ab (from)
ad (to)
be (by)
com (with)
de (from)

dis (apart)
en (in)
ex (out)
in (into)
in (not)

pre (before)
pro (in front of)
re (back)
sub (under)
un (not)

Ten common suffixes appropriate for the elementary level and useful because of their frequent occurrence are: *er, est, ful, ish, less, ly, ness, y, ing, ed.* Eight other common suffixes are: *ion, ian, ity, ial, ic, ical, ious, ate.*

A list of common roots and affixes is included in the appendix on page 112. The spelling of the root may change when a suffix is added (*cry, cried*). Most suffixes have a grammatical function, such as forming a verb, noun, adjective, or adverb. When many suffixes are learned, they can be classified on this basis. *Eg, er, or,* and *ness* make derivatives that are nouns.

The ability to use roots and affixes is a basic skill. As one's vocabulary and experience grow, one becomes more and more familiar with and dependent on the standard root words in English, which are derived mainly from the Latin and Greek. Pupils may compile their own list of known roots with meanings and illustrations. Fourteen master words have been identified by Smith and Dechant[5] as containing one or more of the elements found in some 100,000 words in an unabridged dictionary. This list is included in the appendix.

Compound words. Compound words in English are composed of two or more base words that combine their meanings (more or less logically) to make a new word. It may be written as one word (blackboard), two words (real estate), or hyphenated (will-of-the-wisp).

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[4] Thorndike, Edward L., and Lorge, Irving. *The teacher's word book of 30,000 words.* New York. Bureau of Publications, Teachers College, Columbia University. 1944.

[5] Smith, H. P. and Dechant, E. V., *Psychology in teaching reading.* 1961. By permission of Prentice-Hall, Englewood Cliffs, N. J.

Occasionally, the second word is inferred (*grocery* for *grocery store*). In some cases, meaning changes when the word is compounded (*may be, maybe*); in other cases, the form seems to be merely a matter of common or accepted usage.

Compound words are introduced early in the instructional program. *Grandfather, Thanksgiving, merry-go-round* are among the first words many children learn by sight.

When a sufficient sight vocabulary is attained, pupils are enabled to analyze known elements and, when encountering new, unknown words, to search for known component words contributing to the new meaning. The practice of encouraging children to find "little words in big words" without reference to meaning and without reference to the total word must be questioned (get in *together*). It seems likely to foster poor habits of analysis without contributing to useful skills.

As new words have been introduced to the language, and as known words have been given new meanings or have been used in new contexts, many inconsistencies and illogical uses of compound words have appeared. Pupils in the middle and upper grades will find the study of compound words a fascinating and stimulating activity. Many interesting and provocative exercises to classify compound words, find inconsistencies, and track down original meanings can be devised.

A special type of compound word is the contraction. In general, there are two types: a compound formed by a verb + not, contracted, as *can't* (cannot), *won't* (will not), and *aren't* (are not); or a compound formed by a pronoun contracted with a verb and written as a compound contracted word, *I'm* (I am), *you're* (you are), *he'd* (he had, he would).

Children need guided instruction in identifying compound words, in recognizing that the compounding, whether indicated by juncture, hyphenation, or not shown but inferred, usually changes in some way the original meaning of one or both words, but that some of the original meaning is retained. Thus *dime store* has a related but different meaning from the two words. Compounds tend to occur in the word classes commonly called adjective-noun. Training in analyzing words into meaningful smaller words can be very profitable; it is a useful tool in attacking unknown words (often the "long" ones).

Words of more than one syllable. The reader who has some facility in syllable phonics will find structural analysis helpful in identifying the syllables within a word and in predicting accent and vowel usage. In addition, if one or more syllables are familiar to him, he can often identify the word. However, he will still be able to fall back on sounding out the elements if the visual and structural analysis is insufficient. Three consonant-vowel patterns are helpful for finding syllables and are commonly taught in the elementary school program.

a. When a double consonant occurs between two vowels, (*al low, of ten, sum mer, slen der*), or when two consonant letters follow the first vowel letter in a word of more than one syllable, the syllable break is usually between the two consonants. In other words, the first consonant ends the syllable, making it a closed syllable, and inferring a short sound to the vowel. As this rule is applied, children will soon note that syllables usually do not break between consonant blends (*a pron, se cret*). Also, they will discover that the *ck* digraph is terminal, rather than initial, that it thus tends to go with the preceding vowel to form a syllable (*chick en, buck le*) and thus infers a short vowel sound in that syllable.

b. When a consonant occurs between two vowels, or when one consonant follows the first vowel, (*o bey, mo tor*), the consonant probably begins the next syllable, making the first syllable open and inferring a long sound for the vowel.

c. When *le* in the final syllable is preceded by a consonant, that consonant letter usually begins the last syllable (*la dle, peb ble, ri fle, mir a cle*). In a word like *pebble*, the consonant beginning the second syllable is silent.

Two other helpful generalizations:

a. In a word, there are as many syllables as there are vowel situations. A vowel digraph or a vowel blend is considered only one situation, even though two vowels occur in print. Likewise, a mute terminal e is considered part of a vowel situation.

b. When *ed* is added to a root word ending in d or t, a syllable is added, otherwise not.

In addition to identifying syllables, it is helpful to be able to determine the syllable likely to be accented, since the accent often influences the sound of the vowel. (Visual clues to the vowel sound usually apply only when the syllable is accented.) Technical rules of accent are very complex, with many irregularities. However, on the basis of many known words children can usually arrive at several generalizations:

1. In many two- and three-syllable words, the accent is on the first syllable.

2. There are some common unaccented first syllables: *(a way, de light, ex cuse, in deed, re turn)*. A primary or secondary accent occurs on the first or second syllable in multisyllabic words.

> A frequent pattern of accent in multisyllabic words is a secondary accent on first (or second) syllable—an unstressed syllable—a primary accent; another pattern is primary accent—unstressed—secondary accent.

3. In derived forms the primary accent often shifts and the vowel thus changes, *e.g.*, excel—excellence.

4. Primary accent usually falls on the syllable before the suffixes *ity, ic, ical, ion, ial, or, ious,* and on the second syllable before the suffix *ate.* Some principles of help for the teacher in reference to syllabication and accent are given in the appendix on page 115.

Some of the major *phonetic* skills and understandings and ways they function at each stage of progress are shown on the chart on page 117. Major skills and understandings of *structural* analysis and of the way they function at each stage of progress are shown on the chart on page 118.

Phonetic and structural analysis are closely related skills and are not easily separated. Pupils should be helped to use both skills in combination and in a variety of situations.

Dictionary Skills

One of the most effective and important skills children learn in the reading program is intelligent and efficient use of dictionaries appropriate to their need and level.

In both phonetic and structural analysis, it is assumed the user has some prior knowledge of the word; that is, once clues are used successfully to give some indication of what the word is, it is understood or recognized as being part of the listening or speaking vocabulary.

There are, however, words which will still be unknown, even when all structural and phonetic clues have been used. Children then need to learn the techniques and habit of using a dictionary. In this situation, the word to be looked up is seen in print, though the reader presumably knows neither the pronunciation nor the meaning. In other words, he searches the dictionary for a precise word met in the context of reading. Essentially, its unknown characteristics prevent his understanding the sentence or selection.

The dictionary, of course, is useful for a number of other purposes. In the reading program, however, the major emphasis should be a quick, efficient locating of the word, a use of the pronunciation aids, and a quick selection of the appropriate meaning appropriate to the context in which the word is being used. In order to develop efficiency in this procedure, pupils need command of several skills. These should be included in the instructional program, and individual children should be checked regularly on these abilities as increasing levels of competence are reached.

Guide to Pronunciation

Locating the word is, of course, the first skill needed. Dictionaries are usually arranged in alphabetical order, so knowing the sequence of the 26 letters is necessary. In the first grade and even kindergarten, picture dictionaries are used. Children gain their first experiences at entry by finding words in the picture dictionary. Sometimes, in fact, they make a class dictionary, or a directory, in which words beginning with the same letter are grouped together. Putting class rolls, room duties, and various lists in alphabetical order provides training and experience in alphabetizing. It also helps develop an awareness of letters occurring in the alphabetical sequence at the beginning, middle, or toward the end. At the middle and upper levels, practice in accurate location may be helpful. Pupils may think of the alphabet in four sections. Consequently, a pupil with a given word learns to open the dictionary in the appropriate quarter that includes the initial letter. For some children, remembering *m* as a "middle" letter or the approximate half-way point may facilitate use. Likewise, *e* and *s* seem to be quarter points for most dictionaries. However, children may well develop this generalization for themselves by using a number of dictionaries.

Early in the use of dictionaries, children should develop the further generalization that letter placement beyond the initial letter is the next step in locating a word. Guide words provide the limits within which words on a given page may be found. Pupils should develop facility in using guide words on the spread as well as on each page.

Quick, efficient entry techniques facilitate use of the dictionary. While pupils may work these out for themselves, it is desirable to check each individual child periodically on his performance and to provide instruction as well as needed practice.

Once the entry word has been located (usually in large, boldfaced type at the left of the column), help is given first in pronunciation and then in meaning. Dictionaries differ greatly in current practice as to how syllables are designated and as to what phonetic respelling system is used. It is probably most useful to train children to find the explanatory notes and the pronunciation key. By the upper grades, children should have had experience with many dictionaries, including several designed for the elementary school, collegiate, and unabridged editions.

Pupils with adequate training in phonetic and structural analysis of words may be able to translate from the syllables designated in the entry word. A phonetic respelling is usually in parentheses immediately following the entry word. Attention should be called to the abbreviated pronunciation key on the page and to the full explanation of the pronunciation key, wherever it is located. Certain symbols are rather standard and should be taught. The *schwa* (vowel sound heard in most unstressed syllables in English) is increasingly being used and is represented by the symbol /ə/. Accent, both primary and secondary, is also indicated. Pupils who have sufficient training in hearing and saying accented and unaccented syllables will be able to use this guide with facility.

Each dictionary uses its own pronunciation key. The international phonetic alphabet,[6] devised by the International Phonetic Association, uses standard symbols to represent sound values. It can be used in any language and has gained some acceptance. It is used in modified form in some current dictionaries. It is difficult to use, however, and while children should know about it, they normally will not use it extensively. It is reproduced for teacher information and reference on page 119. By the end of the elementary school, pupils should be familiar with many of the symbols used in pronunciation guides of the dictionaries they commonly use.

Selecting Definitions

From the standpoint of reading, the major reason for using the dictionary is to find the meaning of a word. The pronunciation is helpful so that the word may be added to one's speaking vocabulary. However, the meaning as used in the context is of prime concern. Dictionaries usually indicate parts of speech immediately following the phonetic respelling. This may be helpful for the reader who is aware of how the word is used in context. Often a number of definitions are given for a word. The task of the reader is to select the one most appropriate for the context in which the entry word is used. If the word is used in more than one grammatical form, the part of speech is usually indicated preceding the set of definitions to which it refers. Restrictive labels, etymology, synonyms, and antonyms may be helpful in determining the intent of the author in using this particular word in this particular context.

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[6] See appendix, p. 119.

Glossaries (limited to terms in a subject or field) are convenient, since the definitions given usually apply precisely to the context in which the word is used. However, this very advantage limits the child's practice in selecting appropriate meanings. The glossary is more efficient for a given task but is not a substitute for dictionary usage.

From kindergarten on, a variety of dictionaries should be available in every classroom. The practice of referring to the dictionary for an unknown pronunciation and an unknown or a more nearly precise meaning will be motivated by the children's observing the teacher's frequent use of dictionaries. As rapidly as possible, pupils should gain competence and independence in use of this resource for their own purposes. Primary and upper grades should have a variety of dictionaries. A school should have enough elementary dictionaries so that class instruction may be provided in their use. A variety of dictionaries should be available in each classroom so that any pupil will have ready access to the one that suits his particular needs at a given moment. By the middle grades, each pupil might well have his own personal dictionary in addition to those provided by the school. By this stage, every child should have had experience in using the unabridged dictionary.

The habit of using the dictionary for word analysis and word meaning when phonetic and structural analysis proves inadequate is important. A word of caution seems in order, however. This is a time-consuming technique. By the time one has located the dictionary, found the word, and selected the meaning, the train of thought has been broken. Pupils may need guidance in picking up the sequence again and in recognizing why the delay was inevitable. On the other hand, pupils should have help in deciding how necessary it is to resort to the dictionary. Many mature readers will carry the thought, even though they would not be able to give a precise definition of a word. Sometimes making a note of a word to be looked up later may be more efficient. Teachers should guard against giving children the impression that every word not known as a sight word should be looked up. This is impractical and unreasonable and more often leads to an entire rejection of the dictionary. An expression such as "If you don't know a word, look it up in the dictionary," while basically sound, does not give pupils the systematic guidance they need in making decisions as to *which* words to look up. By the same token, asking pupils to copy dictionary definitions, or even to write their own with the word in a sentence of their own, is of questionable merit, at least from the standpoint of the instructional reading program. The dictionary is a tool, helpful in word attack and analysis. Its value lies in helping the reader understand more effectively what the author is saying. Any techniques or procedures that interfere with, rather than support, this objective are defeating the purpose.

Separate dictionary exercises and drills may be helpful for some pupils. At all grade levels, an evaluation should be made of a student's skill and facility in locating a word and in selecting the appropriate meanings. Appropriate instruction should be continued at increasing levels of difficulty.

In the manuals and workbooks of most basal series, there are suggestions for activities and experiences at each grade level. An excellent chapter is included in Gray's *On Their Own in Reading.*[7] The introductory material in most dictionaries also provides a good background. Publishing companies often have free or inexpensive instructional material suitable for use in the classroom.

Efficient use of the dictionary is the most mature of the word analysis skills. It is the technique which makes the individual truly independent. It is a never-ending source of new vocabulary, providing interest, challenge, and satisfaction. It is a vital part of the instructional program in basic skills of reading. It builds on and extends the more fundamental skills taught in phonetic and structural analysis. Without a sound foundation in these, use of the dictionary is likely to be awkward and relatively inefficient, and is often rejected. Consequently, all procedures taught as part of the phonetic and structural analysis skills should be consistent with practices used in the dictionary.

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[7] Gray, William S. *On their own in reading.* Scott. Fair Lawn, N. J. 1960

Word meaning. In the instructional program for the basic skills in reading, word study and vocabulary development may be thought of as a three-pronged program, in which three parts of a totally interrelated ability need to be identified for instruction and guidance. These three aspects are word recognition, word analysis, and word meaning. Though any reader may be adequate in one and not the others, the skilled reader is competent in all three. The aim of instruction is to provide a balanced and interwoven program where each facet supports and strengthens the others. Neglect or overemphasis of any one can produce a reader less efficient and less skilled than is desirable. Basic to all word study and vocabulary development is the meaningful interpretation of words—the awareness that the symbol (written or spoken) has reference to real things or ideas, that words are used to represent the experiences, the sensations, indeed the thoughts of human beings, as each tries to share or communicate these with others. Hence, any word to be useful must have some referent, based in personal or vicarious experience. Young children learn words when someone says "light" and points to a *light; ball, cat,* and so on. *Pretty, naughty,* and *hot* are less easy to define. A word essentially represents a classification, a generalization of commonness. A word in isolation thus means relatively little beyond this classification. Only as it is put in context does it convey meaning—and changes—in varying degrees. Experience alone will not add significantly to one's vocabulary, unless the person is actively seeking the terms and expressions commonly used to represent the activity. The speaker or writer has an obligation to select the word that represents most precisely the experience or meaning that he wishes to convey in the context.

In teaching word meaning, therefore, it is important that words be studied primarily in context. Vocabulary should be taught as part of each instructional lesson. Before children are expected to read a story or selection, there should be some assurance that they will have some meaning to attach to the words they encounter.

Vocabulary is frequently taught separately as an exercise in word study. However, the mere copying of a dictionary definition cannot be assurance that any meaning is attached.

It is essential to relate new terms of this sort to the pupil's own experiences, using equivalent words, giving illustrations where appropriate, and providing real experiences, as going to see a gorge, or working with litmus paper, rather than simply reading or hearing about it. On the other hand, many words are learned vicariously by reading or hearing them in context. Teachers must always keep in mind the extension of meaning vocabulary and recognize that with all words, particularly abstract ones, the process of classification and understanding is never quite completed. Complete rightness or wrongness of word meaning is rare. It is usually a matter of degree of precision and uniqueness within a general classification. As time passes, moreover, words change meaning. For example, many words used in pioneer days no longer are in general usage, but are needed when writing about the activities of pioneers. For large segments of our population, terminology familiar to farm children is relatively meaningless, even to those living in rural areas. For children, as well as adults, there should take place a horizontal extension of vocabulary (discovering new meanings of known words), as well as vertical (adding more words). This is well illustrated in those subject matter areas where particular attention must be given to words already meaningful in one context, but denoting a significantly different concept in the context of the new discipline. For example, in measurement, *foot* has a precise and unique meaning. While the word derives from the human appendage familiar to children, one cannot assume that the word *foot* in the context of an arithmetic problem will convey the desired meaning to the pupil. *Middle Ages* is another example.

In addition to unique meanings, the content subjects in the elementary school present a substantial load of general meanings. Many of these words will not pre-exist in either the listening or the speaking vocabulary of the pupils. There is thus no recognition vocabulary to build on. In many cases, moreover, these words will represent concepts new to the pupils. Being able to say the word does not insure understanding the concept.

It has been suggested that social studies and science content should be written in simplified form to avoid the heavy vocabulary load. While some changes can be made, it must be remembered that certain words of a content field stand for concepts necessary to the discipline. They cannot be put in simpler terms and carry the same meaning. If for instance "simple" words must be substituted for *photosynthesis*, it would create a confusing and tediously long description of the process; in the long run no simplification would occur. Either the concept is too difficult or the precise term representing it should be presented.

Classification of words. Another means of extending vocabulary is through the more formal study of words. English has several word groupings: synonyms, antonyms, homonyms, and so on. A synonym is a word that has a meaning the same as or similar to that of another word. Frequently, however, one or more of the meanings may differ quite widely. Because of semantic changes, many words have developed new meanings, often in addition to the original meaning. The words have been put to specialized use, used figuratively, and so on.

Hence, synonymous words are similar, sometimes interchangeable and to some degree equivalent, but never identical in meaning. One of the values of studying synonyms is in differentiating between words, studying some of the kinds of differences between words that are similar in other ways. Certainly, this knowledge provides greater ease, freedom, and variety in speaking and writing, and aids in accurate and precise use of words. This helps one understand new words and enlarges one's vocabulary with words which can be used precisely and with good judgment. Pupils should learn not to use indiscriminately words they do not understand.

In a dictionary, synonyms are often listed to help clarify the meanings of a word. When children study synonyms they should be aided to see that the likeness between two words is often only between certain aspects or certain meanings. One must find out in which ways "words mean the same thing" and in which ways they differ. Excellent exercises in vocabulary extension can be developed in this area, suitable for youngsters with a considerable range of reading ability.

Antonyms, by the same token, are rarely words of completely opposite meaning, even within the same or like classification, but they may be considered words which express the opposite or negative of one or more meanings of the word. Usually a word which has any antonym will have several antonyms; the base word plus a negative prefix or suffix is usually considered an antonym, but is fairly obvious. The antonyms of a word help a child to understand the word. To know what a word is *not* is sometimes as important as knowing what it is. The meaning may be sharpened and clarified. Antonyms are probably not so valuable as synonyms for discrimination, but they can be useful in extending vocabulary, both with new words and meanings for familiar words.

Homonyms form a grouping of words whose like characteristic is in sound. They have different meanings and usually different spellings. When the spelling is alike, but meaning and origin are different, like words are called homographs. Children enjoy working with groups of words such as homonyms or homographs and can extend their vocabularies considerably through carefully planned and judiciously checked exercises.

Another group of words that provide much interest, stimulation, and challenge consists of figures of speech and idioms. One who has studied a foreign language recognizes how difficult it is to translate literally or to define various idiomatic expressions and even figures of speech. Yet these are the highlights and the unique aspects of any language. To recognize a figure of speech, to know the context in which it is likely to appear, and to understand it within the context are abilities which mark a skilled reader. Again, if the expression is in one's listening or speaking vocabulary, the meaning is easily grasped. One must recognize, however, that a literal meaning will not suffice. Of course, the more varied the situations in which one reads it, the more meaningful the expression will become. Pupils enjoy activities in which they "track down" figures of speech and use them in new situations.

Studying word origins is another type of activity useful in extending vocabulary and in developing more precise meanings. Upper grade children, especially those skilled in reading, may go far in studying word origins. In the process they may gain considerable understanding, not only of English but also of other languages as well. They may discover the complex problems of communication in a world of many languages, as well as the likenesses and differences between English and other languages.

Extension of vocabulary, precision of meaning, and depth of understanding are almost unlimited in scope. Bright children possessing special interest and aptitude in language study can range far and wide. Children less verbal in nature may not find these studies so challenging and stimulating and are unlikely to attain an extensive range, but, even then, the "charm of words" is likely to hold an appeal. Well handled, the study of word origins may be a satisfying activity for all, with each progressing at his own rate.

Many readers find word games exciting, challenging, and effective in extending and enlarging vocabulary. Word games may be provided in the elementary school program, often on an individualized basis. Anagrams, for instance, has long been a favorite children's game. A modern and perhaps more challenging game is Scrabble. Elementary school children can do crossword puzzles; these can be pupil-made, teacher-made, or commercial. The word meanings of well constructed puzzles are relatively precise, but often "tricky," because the word is basically out of context. This in itself is a major understanding. In those puzzles less well done, the lack of precise meaning or the use of distorted meaning can be amazing—and perhaps will help develop a desire not to misuse the language. Double-crostics, puzzles, and other word games are plentiful and will provide a challenge for teacher and pupil alike.

In today's world, vocabulary is being constantly extended through television, radio, newspapers, and other mass media. To an unprecedented degree, a number of new words now in common usage are derived from space probing. Because of mass media, these words sometimes become a part of everyone's vocabulary almost overnight. True, the meaning attached is sometimes limited, but this is true of most new words by whatever means they enter our vocabulary.

Teachers at all levels, but particularly in the primary grades, may be unaware of the extent of a pupil's vocabulary. By the same token, it is easy to be misled. The 6-year-old who talks glibly of missile shots and rocket ships may not know what we mean when we talk about a shoehorn.

Basal instructional materials usually provide specific exercises for vocabulary development and the clarification of meaning. Usually each new lesson or story contains some words which are new not only in format but in meaning. These should be developed systematically. It is wise, however, to ask children for their understanding of words, even those considered new. Often they have general or specialized meanings picked up from many sources, and on the basis of the children's contributions, a much more meaningful and stimulating presentation can be made. Any reading system which fails to provide for the steady, systematic, and rapid extension of meaning vocabulary is doing a disservice.

Workbooks and practice books are available, though they sometimes make too much use of words in isolation or in lists. Dictionaries, trade books, wordbooks, and puzzles are increasingly available. Essential, though, are plentiful opportunities to talk about words, to use them in many ways, and to read them in many contexts.

Chapter 2

COMPREHENSION SKILLS

Understanding

Understanding the meaning of what one reads on the printed page, so that in effect one's behavior is influenced or guided by the message, is the real purpose of reading and should always be at the center of the process. While comprehension begins almost immediately as words are recognized, one cannot assume that because the reader perceives and pronounces words he is actually understanding them.

The ability to comprehend is influenced by one's maturity and experience in the area about which he is reading, as well as by his general ability to think, reason, and handle verbal symbols. Comprehension is developmental in nature; one perhaps never comprehends exactly nor completely what the author is trying to communicate. Only as the words used relate to the reader's own life and experience and thus stimulate thought, does he communicate with the author. What the reader gets from the printed page is proportionate to the experience that he brings to it. Through his own knowledge and experience, the reader associates the meaning of the words with their printed symbols.

In the instructional program for basic reading skill, a systematic development of the various aspects of general comprehension is crucial. There are many different skills involved in the growth of comprehension. Guidance and sequential skill development are necessary. In addition, practice for the maintenance of skills must be provided with a wide variety of materials and situations.

Perceiving and understanding words in relationship. Understanding the literal meaning of a printed page involves first perceiving and understanding words as meaningful units. Words in isolation carry an unclear meaning. Their specific meaning only appears when they are used in phrases and sentences; only then does the context in which the author uses them connote his meaning. From the beginning of the instructional program, pupils should be guided to group words into meaningful units. It is the inefficient reader who tries to add the isolated meaning of one word to that of the next. Words must be grouped into thought units and given proper emphasis so that the sentences may be understood. Thus even in initial instruction, there is stress upon the words in context with the story theme and with pictures.

Pupils should also be given guidance in sensing the unity of a sentence and in seeing the essential facts of sentences, first in the direct sentence order and later in inverted orders. As connectives (*and, but, so, because*) are used, the pupil should be guided to see how the meaning is affected. Punctuation marks, both terminal and within the sentence, need interpretation. Their influence on meaning should be pointed out.

At more mature levels the learner studies the relation of sentences within paragraphs, to grasp the meaning of the paragraph as a whole. Various types of paragraph organization may be noted. In longer selections, notice is taken of the relationship of paragraphs to each other and to the total selection. Children learn to identify topic sentences within paragraphs and to see the relation of other sentences to them, as well as the total structure of topic sentences in creating the complete selection. In still broader perspective, readers need to learn to perceive the total book, always seeking to understand what the author is communicating.

Perceiving and understanding the organizational pattern. Understanding the literal meaning from the printed page also requires perceiving and understanding the organizational pattern—the author's plan or structure through which he develops his message. Much of any basal textbook reading material is in "story" form, but the organization of factual material should also be studied. The sequence of development can be noted. Has it a time sequence, as in stories with the organizational pattern; first . . . next . . . and then . . .? Is it a logical sequence, as when a theme is stated and supporting points are cited? Is it a series of statements co-ordinated into a generalization? Is it plot development, with the stage being set and with a gradual unfolding of the action? A frequent pattern of development, both in stories and, more often, in expository material, is the statement of a main idea and then an elaboration of supporting facts and details. Children should be guided to find or state the main idea of a selection and to note how the author uses supportive information to substantiate it. In some cases they will note the failure of the author to do this. The organization of ideas and their relationship to the central thought, to the main topic, to the plot, and to character development are all ways in which authors may develop the message. By the middle and upper grades of the elementary school, children would be aware of and able to identify some of the more usual organizational patterns in story development and in expository or factual material: news stories, reports, essays, and the like. They should be able to identify the pattern used in story development and to contrast it with other types of writing.

Perceiving and understanding factual information. Often, the main purpose in reading a selection is to get specific factual information. A precise comprehension is sought of exactly what the author has written. This includes such specific facts as names of characters, details of setting, what was said and by whom. In expository material, note is made of such facts as how many, where, when, under what conditions, and so on. Factual information is that which the author states precisely as being so.

Much of the reading done in elementary school and all through life is for this purpose. To check one's ability to understand this factual information, specific factual questions can be asked: Who was coming? What color is the wagon? In what year did it happen? Sometimes the questions are of a more general nature: How did he get to town? Tell about her costume. Describe the car he drives.

Another type of factual information is that involved in reading and following directions. This is a specialized kind of reading, where the reader must understand exactly what the author says and then proceed to perform the activity in the proper manner and sequence. Sometimes this is done a step at a time, as in construction activities. A more difficult type is one requiring a reading of the full set, remembering, and then doing each step. There are many occasions in elementary school situations where children practice this comprehension skill. Determining whether they do indeed comprehend is relatively easy, since the action reveals precisely how much and what was understood.

The first task in comprehending the printed page is to understand, or perceive as literally and precisely as possible, exactly what it is the author means. This is sometimes called *assimilative* reading, in which the reader concentrates on grasping the literal meaning without evaluation of or reflection upon the significance of the ideas. *This is the* *first responsibility of the reader—he is not free to criticize, to evaluate, or even to interpret until he has understood just what it is the author has stated.*

Interpreting

While it is essential for the reader to comprehend the precise and literal meaning of the author, this is only the first level of comprehension. The pupil who comprehends only literal meaning, without the ability to interpret and think about the content, is reading at a relatively low level. He is a literal, unimaginative reader, limited in his appreciation and use of the printed page. Systematic instruction should be given to all pupils in ways to interpret material they have read. Interpretation, even more than literal understanding, is a function of the pupil's general ability, his experience, and his maturity.

Relating to previous experience. As soon as the reader understands what the author has said, he should begin interpreting this in relation to his own previous experience. At the first grade level, for instance, children are able to relate to their own experience by responding to such questions as, "Could this have happened?" "What would you have done if you had been there?" "Did you ever see an animal like this?" In other words, not only does the child think with the author, but also, by relating to his own experience, he goes beyond and adds to the facts given. In some cases, actual experience of a similar nature can be provided—for instance, before reading about a farm, children may take a trip to a farm. Then, when they read about it, they have a better basis for interpreting the printed page. Vicarious experiences such as films, pictures, and realia can also be provided. Often, however, readers must rely on individual personal experience. Those who have more experience backgrounds to draw on will, of course, have better understanding and gain more from the printed page.

Awareness of the author's purpose. Closely allied with the ability to see the author's organizational pattern is an awareness of his intent and purpose in writing the selection. Even in the first grade, children are able to determine whether this was a "fun" story, a story to "teach us a lesson," or one which helps us learn more about how people lived, and so on. At more mature levels, they are able to anticipate the purpose even before reading the story or selection and thus become more identified with the author and what he is trying to do.

Children can learn to sense the author's mood and the tone of the selection. At the middle and upper grades, pupils will be able to detect whether a selection is written in a serious mood, whether the tone is one of criticism or one of support and commendation. They will sense those selections written to sway one's emotions, to appeal to one's prejudices, or to "tickle one's fancy." Skill in this aspect of comprehension prepares one for the detection of propaganda as well as for the enjoyment of sheer fantasy.

Elementary school pupils from first grade on can profit from instruction in interpreting the author's purpose: Why did he write this?

Sensing the main idea. In some types of reading the author has a main idea, a single impression, or point of view he wishes to communicate. Illustrative material, details, and supporting incidents or anecdotes are cited, but are really quite irrelevant to the reader who simply wants the "sense" of the article or passage. This is a rapid type of interpretative reading, used frequently in recreational reading and in newspaper and magazine reading. It is developed through use of questions such as, "What is this story about?" "What is the author's main idea?"

In material suitable for this type of reading, pupils should not be expected to remember details, to cite passages, to reflect and so on. This is a specific kind of comprehension skill and is very useful in certain types of reading. All children should have instruction in this skill in order to be able to use it with facility in appropriate material and at appropriate times.

Predicting outcomes. Predicting outcomes is another skill in interpreting what one reads. It is based on a literal understanding of what the author has actually said, plus an interpretation based upon thinking, experience, and judgment. This skill, too, is sought in the first grade even before independent silent reading is established, when we ask, "What do you think will happen next?" At a more mature level, the reader of a news story, or of an essay on a topic of current public concern, seeks to predict outcomes, not to be checked with what appears later in the article, but with what actually does happen in the course of later events. Mystery and detective-type stories provide a further type of material for developing this skill. Perhaps their appeal lies in the excitement generated not only in what the author says, but in "second-guessing" him as to the outcome. In this type of comprehension, the reader needs to see relationships beyond those stated by the author and to estimate, predict, or hypothesize what is most likely to happen.

Most of the decisions one makes in life involve this ability: to see the facts available and then to predict what one's best procedure will be in the circumstances. This constant awareness of "what will happen next" is basic to living and to a full appreciation of the joys of reading.

Drawing conclusions and making generalizations. Another comprehension skill is the ability to interpret the factual information in such a way that one can draw conclusions and make generalizations based on the content. The ability to see abstract relationships among several more or less discrete concepts and to draw these together into a conclusion or generalization is dependent upon general mental ability; there are wide differences in this ability among children and among adults. It is, however, a characteristic of superior readers and is a skill that has large potential. It should be taught at all levels of the elementary school program. All children should be challenged to formulate principles, inferences, generalizations, and conclusions, based upon facts learned from the printed page and through their experiences. Reasonableness of such generalizations and conclusions should be checked, and on occasion pupils should be helped to defend and indeed to attack such interpretations.

Children in the elementary school, particularly those with limited experience backgrounds, need help in checking generalizations. They tend to generalize without sufficient factual evidence. Opportunity must be provided to state and discuss generalizations and conclusions.

The ability to generalize soundly is a high level of comprehension skill requiring thought and reflection. It is a real test of the thoroughness of one's comprehension ability. It will often be slow and deliberative; it can be effectively done only with certain kinds of content.

Forming sensory impressions. Some types of printed material are best interpreted by means of sensory impressions. Poetry and some literature are obvious examples, since they appeal to senses of sight and sound, feeling, and perhaps even to taste and smell. Sensory impressions often involve emotions—the ability to "feel" as a character does or as the author did in writing.

However, other descriptive material, such as a selection describing a pioneer home, must be interpreted through the visual image created in the mind's eye, by which the factual information may be placed in setting and context. Appeals to sound, smell, and feeling occur in some of the best expository as well as narrative writing. Again, the experience a pupil brings to the page helps him interpret sensory impressions. If he has felt the wash of waves in a river or a lake, he is able to interpret the description of a storm at sea level better than if he has never seen a large body of water—but not so well as if he has experienced the pounding of waves along the sea coast. Much science material is written in terms of sensory impression.

Interpreting what one reads through use of the higher mental processes and of one's own experiences is sometimes called *associational* reading. It is a thoughtful process, in which the reader tries not only to grasp the literal meaning, but also to associate this meaning with his own experiences, impressions, and thoughts. These skills should be presented systematically in the basic program of reading instruction in the elementary school, so that all children can discover and practice them.

These skills are even more appropriate to high school students and adults, though, of course, the nature of the material being read and the maturity of thought will differ.

In this area, however, there are numerous opportunities to challenge superior students and to adjust to those with but limited abilities to deal with verbal and abstract concepts. Skill in these areas increases interest in reading and helps children grow in their ability to think, reason, and read maturely. Most teacher's manuals accompanying basal readers contain numerous suggestions for appropriate kinds of interpretative activities to develop this aspect of comprehension. Additional help will be found in many of the books listed in the bibliography. Special workbooks are available with short exercises to develop both understanding and interpretation.

Appreciating

The highest level of comprehension is that which is called appreciation. Not only can the appreciative reader understand the literal meaning and interpret it in relation to his own past and vicarious experience, but he is able to extend concepts and ideas gained, to evaluate them, to reincorporate them as part of his growth, and to guide his own behavior. Appreciation is defined as the act of estimating the qualities of things (and ideas) and of giving them their due value; to exercise wise judgment, delicate perception, and keen insight.

Two aspects of appreciative reading will be considered, critical reading and creative reading. These types of reading are closely related to, and are probably aspects of, critical and creative thinking. Comprehension in reading is, in fact, thinking stimulated by the printed word symbols. In one sense all reading is creative thinking, in that the reader makes new meanings with his imagination, stimulated by the words supplied by the author.

Creative reading. Several aspects of creative reading can be identified and developed with children in the basic instructional program in reading. One of these is identifying oneself with the character and with the plot development in a story. Probably all readers are able to do this to some extent. For instance, even in prereading activities, some children identify so intensely with the character in a story being read or told that they automatically reply to a question as the character would. Some readers identify themselves with characters in a story so completely that they go through emotional crises of almost comparable intensity. Sometimes one closes a book with the sense of having really lived in or participated in an event. Such is creative reading of the highest order. It can occur only when reading well written material. It is probably experienced even by excellent readers only occasionally. But at all levels, children can have some sense that they are identifying with, and truly creating, the characters and plot in narrative material.

Another type of creative reading is in the sensing of humor, irony, satire, the ridiculous, the nonsensical, or the exaggerated. Humor is essentially created by the reader; what appears most incongruous and truly funny to one person often is not to another. Sensing humor in a situation requires sufficient background so that one can compare and pick the incongruous or unexpected element. It also requires a level of mental maturity, or abstract sensitivity, so that the "essence" can be appreciated. Young children and those less capable mentally can appreciate only the more exaggerated and most obvious kinds of humor. Appropriate materials, however, provide an opportunity for all to meet humor in their reading.

A third type of creative reading occurs when one is able to see the application of an idea, a thought, or a sensation to one's own life situation—when the reading of the printed page in effect stimulates one to create a new condition of which he was previously unaware. This can be applied to tangible objects and is also appropriate to ideas, thoughts, inferences, and implications. For example, on the basis of what one has read, a person sometimes forms an opinion, previously not held about a topic, theme, or person. The opinion may, of course, be prejudiced. Nonetheless, if one reads well, one does create new ideas or thoughts that are stimulated by contact with the author. The gaining of new ideas and the forming of new opinions occur in reading all types of materials, whether mathematics, science, literature, or the social sciences.

The creative reader is one who gains from the printed page considerably more than an understanding of precisely what the author has recorded. On the basis of what he reads, he creates opinions, new ideas, inferences, understandings, identification, and so on. This is the aim of all good readers; once attained it is stimulating and highly rewarding, and constantly leads on to new experiences.

Critical reading. Critical reading should be interpreted not in the sense of fault finding or of negative reactions, but in the sense of identifying what the author was trying to do, and of determining wherein he did it well or poorly. The critical reader thus evaluates the printed material in terms of varied criteria, selecting those appropriate to the type of exposition, the intent of the author, and the reader's own experience. Several aspects of critical reading should be included in the instructional program. For example, the critical reader considers the new ideas and information in the light of his own previous knowledge, background, and belief. He evaluates the new against a framework of established concepts. He asks questions such as, "Could this have happened?" "Is this in line with what I know about it?" "Is this reasonable in terms of other facts I have?"

The critical reader is also able to compare sources of information. As he reads a given author, he compares the presentation with other sources of information on the same topic, with other authors in the same field, with other media or methods or kinds of approach. He may compare one source with another written at a different time, or in a different country, or by a different author.

The critical reader is aware of the techniques used by authors to write emotionally slanted material designed for propaganda. He recognizes that all authors seek to influence the reader, but he is able to detect those who use such devices as smear words, omission, part-truth, distortion, and so on. He also recognizes good propaganda and in either case can evaluate its relative effectiveness.

The critical reader evaluates style, the techniques an author uses to convey his message. He recognizes the "ring of truth," the degree to which characters "come alive," plots unfold, a logical sequence is built, a theme is developed, or a mood is portrayed. He senses the authentic, the beautiful, the useful, the good. Only as he has experience with a wide range of material and has guidance and instruction —the skills and techniques of critical reading—can he attain competence in this area of reading comprehension.

Appreciative reading is a high order of comprehension. It is an active process wherein the reader interacts and reacts with the author in the communication of ideas, information, appreciation, and enjoyment.

Rate of Comprehension

Comprehension in reading is complex and involved. It depends on such factors as the purpose of the reader, his familiarity with the material, his general mental ability, and the readability and legibility of the printed material, together with the style and format employed by the author. The good reader adjusts the rate of his reading to these conditions, particularly to the purpose for which he is reading.

Pupils in the elementary school need help and guidance in recognizing that there are various levels of comprehension, depending on their reasons for reading, the need for remembering, the complexity of the concept, and so on. Each pupil should have instruction, practice, and guidance in determining appropriate levels of comprehension for each reading task. For example, "This is an easy, entertaining story. I think we can read it very quickly, just to enjoy it" or "We will need to read these arithmetic problems carefully and slowly since they are rather difficult." Children can be guided to set their own goals and purposes for reading, to estimate the type of reading that will be needed to accomplish the purpose, and to work independently on these tasks. Rate of comprehension thus is the time required to read a given selection for the purpose at hand. Good readers are flexible, able to adjust their rate to the material and to the task.

The elementary school pupil who is making satisfactory progress in the basic reading skills normally increases his rate of silent reading rather steadily throughout grades. By the sixth grade, he is reading between 200 and 300 words per minute in material of easy-to-average difficulty. Because of excessive attention to detail, a concern over word study, and a desire to recall every item, some elementary school pupils develop painfully slow and laborious reading habits. Thus some attention might well be given periodically to reading rate. Pupils might keep a record of their timed words per minute in material easily read, tested at intervals throughout the school year. Attention to speed and a steady, though modest, rate of improvement are desirable. Teachers and pupils should be aware, however, of the rate at which comprehension begins to suffer. Every speed exercise should be accompanied by a check on comprehension.

It should also be noted that slow-learning children will be slow-reading children, simply because their ability to think rapidly is limited. Brighter children, on the other hand, tend to become bored, to lose interest and attention if their reading rate is considerably slower than their thinking.

In general, the use of reading machines and mechanical devices to increase rate of reading is not needed with elementary school pupils. Wide reading of easy, interesting material is usually effective, particularly if emphasis is placed on quick reading. It is helpful to have a collection of "easy books for speed reading" available and to encourage some reading for this purpose. Learning to adjust one's rate to his purpose and to the difficulty of material, and to use several speeds as the situation may require, is of very great importance.

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Chapter 3

STUDY SKILLS

The instructional program in reading in the elementary school should include systematic and sequential instruction in the more mechanical aspects of using various reading materials. A number of skills and techniques are needed by the independent, competent reader which, while perhaps not reading *per se* in terms of word identification or comprehension, are an implicit part of the reading process. These should be included in the instructional program, with guidance and practice provided at all grade levels for an increasingly complex attainment. Study skills include: (1) locating information to be read, (2) reading pictorial materials, (3) organizing material read for recall, and (4) adapting techniques to special situations peculiar to each content field.

Locating Information

One of the tasks of the independent reader is to locate material to be read. In the usual set of materials prepared to be used for instruction in reading, each selection is placed in sequential order, geared to appropriate length and difficulty, often with vocabulary, style, sentence length, and even punctuation carefully planned. Reading of this sort is limited in use. It is intended to provide the context within which practice and instruction can be given. It is not suitable material to use when one has a problem or a "felt need"—when one wants to know more about a question, to solve a problem or to gather information on a topic. Most reading outside of an instructional program is done to satisfy personal needs. Once the purpose is identified with varying degrees of precision, the pupil needs to be able to decide upon probable sources: places or types of printed material in which he can find the answers, information, or material wanted. Not only must he identify probable sources, he must be able to locate one or more of them. Once the sources are located, the reader needs to determine whether the entire volume is relevant or whether only parts are useful to his problem. Thus, he must be able to use the index and table of contents to find general or specific references. In addition, he will probably need to skim to see if the material thus located is indeed appropriate and relevant to his original purpose.

In this context, certain skills can be identified for which systematic instruction should be provided in the elementary school.

Using parts of books. Knowledge of and skill in the use of the various parts of a book form a basic study skill. In the first grade, this includes such things as knowing that the title of a book gives the reader some indication of its content. The table of contents is also shown to contain a list of the selections included and of the page on which each starts. The sequence of pages seems obvious, but it is an understanding basic to the efficient location of material.

With more mature readers and in more difficult materials, additional standard parts of books are identified. The index is a useful tool for locating specific topics. Systematic instruction should be given in the efficient use of the index, and opportunities should be provided for plentiful practice. A list of maps, illustrations, or tables is included in certain kinds of books, particularly in the social studies. The title page, with its references to authorship and copyright date, provides useful information that the reader should learn to note as a matter of habit. At the middle and upper grade level, many books will include a preface, acknowledgments, a foreword, and one or more appendixes. Each of these provides certain information that will be helpful in deciding whether this book or source is an appropriate one for the purpose intended when selecting something to read. The footnotes, glossary, bibliography, and list of references are also helpful for locating further information, once a first source is located.

Special reference books. In the search for material, pupils will have need for instruction in using special kinds of books, those known as reference books. There is a great variety of reference books ranging from the very general to the very limited and specific, from the easy to the very difficult. Pupils in primary grades learn to use the picture dictionary as one source of material. While they may not be able to read it, they can use an appropriate nature identification book to locate material helpful in identifying a bird, a leaf, a rock, or an insect. Children become very proud of their ability to use an identification book of this sort to identify a specimen, and to "key out" a classification.

Special reference books include the handbooks used by the Boy Scouts and Girl Scouts of America and similar organizations. Children may be familiar with these handbooks, but even those who are members of the organization often profit from guidance in their efficient use. For nonmembers, these books may illustrate the common format of the handbooks of this type. A good reference book of children's games should be available in each classroom, and pupils should learn how to locate a given game and to obtain needed information regarding its rules.

Reference books that give information about topics of interest to elementary school pupils such as stamps, flags, coins, and the like, should be available in the school library, and should be on loan to classrooms where interest is high. "Curious fact" books have a strong appeal to middle and upper grade elementary school pupils. Since this type of information is often difficult to find in regular works, acquaintance with a variety of these is most useful.

Dictionaries are another type of reference book. They may be under-used if they are considered only for word-meaning or for spelling. Librarians include special dictionaries in such fields as music, science, biography, and so on. Use of this type of dictionary should become a habit as pupils extend their need and use of reference books.

In the middle and upper grades of the elementary school, pupils should become skilled in the use of various encyclopedias. Several sets of encyclopedias are designed particularly for the use of elementary school pupils. Encyclopedias require many skills not used in other kinds of reading. Use of a separate index volume or of a number or letter arrangement of volumes within a set requires that the reader understand this code and be able to locate his topic in the proper volume. Use of material once located in an encyclopedia is also somewhat different from reading materials of narrative or less rigorous style. Encyclopedia material is always very condensed, usually of broad coverage, and often written in relatively difficult style, since conciseness and brevity are standard. Therefore, the reader must keep his topic in mind, since he may often need to select only part of the entire presentation as being relevant to his quest. Children find it very difficult to rewrite encyclopedia material. Techniques of selecting and acknowledgment of appropriate quotations should be taught.

There are a number of commonly used general encyclopedias, as well as several one-volume encyclopedias and supplemental thematic sets. Rather than purchasing several sets of one encyclopedia, schools should own sets of several different ones, thus expanding reference resources at little or no extra cost.

Two popular versions of a world almanac and a book of facts are readily available in either paper or cloth binding and are excellent sources of information. They are inexpensive and available in any store where books and magazines are sold. Their variety of factual information on a wide array of subjects is an endless fascination to elementary school youngsters. Several copies of the various publications should be available for ready use by pupils in every middle- and upper-grade classroom. Comparisons of entry items and coverage can be made by pupils; in some cases, one source will be more useful than another for a given purpose. Comparisons can also be made of these popular books of fact with the more accurate meaning of almanacs as "a calendar of the days of the year, in weeks and months, indicating the time of various events or phenomena during the period . . . or giving other pertinent information." *The Farmer's Almanac*, also inexpensive and readily available on newsstands, more nearly represents the latter type of publication. At advanced levels, almanacs and yearbooks continue to provide quick sources for specific bits of current information.

Another useful reference tool is the atlas, a bound collection, usually of maps, but also of plates or tables illustrating any subject. It is usually introduced at the middle grade level. Elementary school editions are available, in addition to the very technical, inclusive, and elaborate editions intended for more mature readers and for specialists in the field. Simplified atlases are occasionally found in dictionaries and in some textbooks.

While many pupils in the elementary school will have practice in using the telephone directory at home, care should be taken that all pupils have guidance in the skillful use of this and other types of directories. For instance, much useful information is contained in the telephone directory, in addition to the telephone number. Format and devices used to present such factual information should be studied in a variety of types of directories.

A great number of indexes are available for aid in locating a wide variety of materials and information. There are indexes of plays, of books by subject, of poetry, and of biography; the *Reader's Guide to Periodical Literature* is an index of articles appearing in magazines. A gazetteer is an index to geographical items. The skills needed in using the index of a book are easily transferred to using a book as an index; the number of such sources and their selection should be made in terms of local facilities and needs. Teachers will find helpful information for their own background in *How To Locate Educational Information and Data*, by Carter Alexander and Arvid J. Burke.[8]

Use of library. In locating information or general material about a topic, children will often be referred to books and other printed material not available in the classroom. The children will then have to go to the library, where additional skills are needed. In many elementary schools, instruction in library skills on a systematic sequential basis is provided by the school librarian. Efforts should be made to integrate this instruction with other experiences in study skills.

Many opportunities to practice library skills should also be provided as part of the instructional program in the classroom. Usually some form of card catalog will be set up in each classroom for use with the collection. In primary grades, this catalog system will be very simple (perhaps only author or topic) and coded according to the classification system being used in the classroom collection. By the middle grades, however, children should be aware of the more sophisticated entries in the central library catalog. They will also need instruction in the classification system being used. Such library files as are available should be included in the instructional program. (See Mott and Baisden—*The Children's Book on How To Use Books and Libraries*.[9])

Using key words, cross references, and other basic techniques. Certain skills are essential for efficiency in locating materials. These include use of the alphabet—knowledge of the sequence of letters from A to Z. Another essential is the ability to select a topic word, representative of the problem field, and to use it as the entry word to indexes, tables of content, encyclopedias, and other reference books. Many practice exercises state this topic word for pupils and thus simply provide practice in using material. This is useful, but pupils should be checked individually on their own ability to select or identify a topic word, or perhaps occasionally a phrase. Closely related is the ability to identify a cross reference and to select another topic word if further information is needed. Key words are often difficult for children to select. Alternate words, perhaps synonyms but more often those of related value, should also be pointed out, and practice given in their selection. Each skill should be evaluated for each individual pupil throughout each year of his elementary school experience and systematic instruction provided.

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[8] Alexander, C. and Burke, Arvid. *How To Locate Educational Information and Data.* New York. Bureau of Publications, Teachers College, Columbia University. 1950

[9] Mott, Carolyn, and Baisden, Leo B. *The children's book on how to use books and libraries.* New York. Scribner. 1961

An additional skill useful in locating information and one that should be taught in this context is the ability to skim. Skimming is a method of reading in a superficial manner for but limited purposes. One does not read the complete text but glides rapidly over the surface, looking for certain specific items or attempting merely to get the gist of the selection, locating material relevant to a topic or in answering a question. Skimming is quite different from the usual comprehension skill, and special instruction and practice are needed.

Interpreting Pictorial and Graphic Material

Specific skills are required for the effective and efficient reading of the compact informational aids that are so popular and used so commonly in all current printed materials. These devices are designed to incorporate a large amount of information in a small amount of space. One cannot assume that because a child can read words in the usual format of sentences and paragraphs with good comprehension that he can automatically handle the technical skills in reading pictorial and graphic materials. Instruction in the efficient reading of this type of material should be provided for all elementary school pupils.

Pictures, schematic drawings, and cartoons. Pictures are used extensively in many texts and trade books. In many ways they are helpful—a picture can present a concept quickly and, in some cases, more accurately than can words. On the other hand, pictures can be distracting in that they break up the continuity of reading and direct attention away from words to pictures.

Questions such as the following may help the reader to incorporate the picture into the total selection and to view pictures as an aid to a better understanding of the author's meaning and intent. "Why did the author include this picture?" "What can you find from the picture that the author did not tell us?" "Is there something the author seems to *think* we should 'read' from the picture that it does not tell us?" "What things does the author tell us that are also shown in the picture?" "Is there anything in the picture that seems to be different from what the author says?"

Notice should be taken of differences in types of pictures. Children can point out the reality of a photograph as compared to a drawing or painting. They can consider the differences between a schematic drawing, a picture, and a photograph and discuss the advantages of each. Appropriateness of certain pictorial material to various subject fields should be developed; e.g., photos, more real in social studies content, are rarely needed in mathematics.

At the middle and upper grades, schematic drawings are frequently used, and cartoons are often included. Youngsters enjoy cartoons, and often a point can be grasped from their use that is hard to put in words. Cartoons require a good background in the topic, as the sketch usually symbolizes some subject or person through caricature or exaggeration. An appreciation of the incongruity being depicted may be difficult for many children. They need an opportunity to discuss the "message" of a cartoon. Various interpretations will occur and should be encouraged. They will depend on each one's background and grasp of the subject, as well as upon his understanding of the depiction itself.

Graphs, charts, diagrams, tables, and time lines. Material of this sort is frequently encountered in reading. It is a graphic and compact way of representing comparative relationships, which usually involve some type of quantitive data. In teaching children how to read material of this sort, the emphasis is on searching for the comparison or relationship among quantities. In the primary grades, this relationship is usually a relatively simple one. Children should have experiences with increasingly difficult and abstract representations. In this type of activity, a wide range of individual ability and interest may be expected. Illustrations may be found in current periodicals such as newspapers and magazines, as well as in books.

Pupils will need systematic instruction in reading the specific aspects involved: titles, subtitles, graphs, and explanatory keys. As pupils become more mature and skilled, more complex materials appropriate to their level of competence should be selected for study.

Because of their format, these graphic materials are often found somewhat removed from the explanatory or reference material in the text. Hence, some practice is desirable in finding the graph or table when reference is made to it. As with pictures, children may find it difficult to interpret the printed text, to search out and incorporate the ideas obtained from the graph or chart, and then to continue the thought of the text.

Time lines are an occasional part of the reading experience of elementary school children. Instruction in their interpretation is necessary if the devices are to be understood now or later.

Somewhat different in purpose, but very useful in out-of-school life, is the ability to read a timetable. These schedules are often put in a complex diagramatic format. Instructions in their efficient reading can be very helpful for upper grade students. Demonstrating how such schedules are used and providing opportunity for all to practice with such material are helpful.

Maps and globes. These are highly abstract representations of concepts that are difficult, at best, for children to understand. Reading globes requires attention to place names, latitude and longitude lines, symbols for geographical and other features, and scale. Any globe or map is, in effect, a compilation of a tremendous amount of information, condensed and represented. Probably few people use or even comprehend all the information shown on any one map. By their nature, maps cannot be true in more than one aspect; they cannot accurately represent true area, angle, scale, and shape concurrently. Any one map is designed to show primarily one aspect or one type of information accurately. Other aspects are represented less accurately or many may even be distorted. Hence, experience with a wide variety of sizes, shapes, types, and projections is necessary. These activities start in the primary grades, and additional instruction continues throughout all grade levels.

Map reading includes interpretation of title, key, scale, numbers, and symbols. Small point, irregular lettering, and unusual placement of words and symbols are further complications.

In the upper grades, a youngster in today's elementary school has need to interpret and comprehend a wide variety of maps. Polar and Eckert projections are frequently used, as well as the more traditional Mercator, conic, and homolosine projections. Projections showing orbits not only of the planets but of earth satellites are of much interest. Pictographic maps can be very misleading unless carefully interpreted. Weather maps use an entirely different set of symbols, all of which need to be read and interpreted with care.

Special notations. It is currently very popular to use combinations of initial letters to represent an organization, a nation, an activity, or a person; e.g., UN, USSR, HiY, LBJ. These symbols become as meaningful as any given word in representing a concept, but it is wise to check periodically to be sure that the children understand the notations, and are able to translate the letters into the words they represent. Abbreviations of a more standard nature are also used and may need interpretation.

In certain kinds of reading, formulas and/or equations are used. They may include +, −, =, ( ), and other symbols. Here again the meaning of the notation should be checked with each child. It is as important to teach the meaning of these symbols as it is to teach the words. Children should establish the habit of attending to these symbols as carefully as to words.

General suggestions. Many of the skills needed by pupils in reading pictorial and graphic material can be taught profitably as part of the instructional program in reading. These devices will be met in all types of reading, with certain ones occurring more frequently in certain content fields. As new techniques are encountered, their meaning, use, and interpretation should be taught. Frequent testing in new situations should also be planned.

With newer devices in printing, more attention must be paid to gadgets and illustrative material, and it is increasingly important to incorporate these aids into the reading process, to use them effectively, to evaluate them, and to discard those that merely detract.

Basal instructional materials usually include some attention to these symbols. Special materials such as those published by map and globe companies should be a part of the class environment. It is now possible to obtain sets of these kinds of materials programed for independent study at different levels. Newspapers and magazines should be provided for pupil use in all classrooms of the elementary school. In the upper grades, local newspapers should be delivered to the school library daily in sufficient quantity and variety so that the children have opportunity to use them.

Organizing To Remember

There are several techniques and skills useful in helping a person remember what he has read and recall it when needed. Every person reads many things which seem unimportant and which he will have little, if any, need to recall. There is no intent that children should be able to recall everything they read. It is important, however, that they be able to select those things which are important and that they have some techniques to help them organize or arrange these ideas in some orderly way that will facilitate remembering and ready recall. Reading with a purpose to comprehend will guide the reader in making decisions about what and how much and in what context or order he should attempt to remember the things he has read. Four levels of recall have been identified.[10] The *easiest level* is to verify whether an answer to a question based on the selection is correct or not: "Did George Washington cross the river?" The *next level* is to answer specific factual questions: "How many men and boats did he have?" "What river did he cross?" *Answering thought questions* is more difficult: "Why did he cross the river?" The *ability to summarize* in one's own terms is at the highest level. Thus, organizing material to answer questions of various types is one way of recalling material read. This activity is frequently used in schoolwork. Children are taught appropriate ways of answering questions by agreeing with statements on a yes-or-no basis, by selecting the best answer from several alternatives, or by writing answers to specific and general questions.

When pupils are required to summarize, there are several rather common techniques which usually involve a systematic and sometimes standard format. These skills need to be taught as a part of the instructional program in reading, because they are so closely related to the reading comprehension process. Since they are not technically comprehension skills, but rather are mechanical techniques of structuring and recording, they are usually considered study skills.

Classification. There are various techniques useful in recording information which can be readily classified. One is simply listing the categories under a classification heading. For example:

Kinds of food	Equipment needed
1.	1.
2.	2.
3.	3.

or

Birds	Flowers
1.	1.
2.	2.
3.	3.

In some cases the sequence is the criterion, and classification is made on the basis of time:

1700–1800	1800–1900	1900–2000

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[10] Durrell, Donald D., *Improving reading instruction*. New York. Harcourt, Brace & World. 1961

Sometimes numerical notation indicates sequence:

Making a . . .

1.
2.
3.

Events, steps in a process, *people-places*, and *cause-effect* are other types of classification commonly used.

Charts are very helpful in classifying information to be remembered. Selecting a format suitable to the topic and organizing the material to show the relationships are skills that can be adapted to many types of material, at any level of difficulty and in any stage of sophistication or maturity.

Pupils at all levels of the elementary school will profit from instruction in increasingly mature ways of classifying, ordering, and charting material significant enough to be remembered with intent to recall, and appropriate to the system of ordering.

Outlining. The mechanics of outlining, the order of notation, and the relative values of items indicated in the subsuming of topics are standard format in the American culture. Techniques of outlining should be taught in the instructional program in reading, based on comprehension. Not all material is appropriate to the outlining process; hence, instruction should be given only in material logically developed, with major points clearly indicated and with supporting subpoints equally clear.

In grades two and three the notation of the first and second order of outlining is often taught. After pupils successfully master this, the greater detail and notation of the third and fourth order are presented.

I.
  A.
    1.
    2.
  B.
II.
  A.
  B.
    1.
    2.
      a.
      b.
    3.

Thus, at the end of the elementary school years, most pupils will be familiar with the notation of outlining to the fourth order and will be able to use this to outline appropriate material for the purposes of remembering and recall. Outlining is a useful skill in preparing written reports or oral presentations. When taught in the reading program, however, its usefulness is primarily as a study skill and as an aid to remembering and recall.

Taking notes, collecting, synthesizing, and summarizing. As pupils gain independence and do extensive reading in many materials, the need to take notes on the material read becomes apparent. Systematic instruction in the mechanics of note-taking should be provided in the reading program of the middle and upper grades. For many people, taking notes has been a hit-or-miss type of experience. Yet this is a highly important study skill.

Instruction should include attention to the purpose for reading, as a guide in selecting the important points to note. Children should learn abbreviated forms, the use of clue words or phrases rather than of complete sentences, and techniques for differentiating between full quotations or excerpts. Attention to topic sentences, to key words, and to center and side headings is also important. In some types of material, these headings when copied become an excellent set of notes, useful in remembering the major points. While, in general, little is to be gained from simply copying side headings, nonetheless, if the supporting material has been thoroughly read, these headings provide a convenient and quick framework for recall. More mature readers will practice shortening even the marginal headings, as well as the topic sentences. Another useful skill is the rapid recognition of common transitional words such as *moreover, clearly, hence, however, consequently,* or *therefore.* Awareness of the use authors make of these words leads the reader to pay special attention to sentences and paragraphs starting with or including words of this sort. Pupils trained in analyzing the organizational pattern of the selection as a part of comprehending the author's message will find it easy to organize the ideas in a format suitable for retention. In general, when taking notes, children should be encouraged to use the shortest and most efficient procedures to accomplish the purpose.

Summarizing, on the basis of notes taken, is a technique useful in review and in recall. Summaries may be a composite of appropriate topic sentences, of various notes taken from the selection, of one's own general summary, or any combination. In some materials, the statement of a theme is more appropriate than trying to summarize. Pupils in the middle and upper grades must read from several sources on a problem or topic and should take notes on all references. They then need techniques for organizing and synthesizing them into a summary, a set of conclusions, an outline, or some other condensation.

General survey method. For the mature, upper elementary school pupil who is reading independently in a wide variety of materials, it may be useful to present a technique popular at the high school level, attributed to Robinson.[11] This is known as the SQ3R, and gives a pupil five steps to follow as a guide in independent study: survey, question, read, recite, review.

Adapting Techniques to Various Content Fields

Elementary school pupils will profit from instruction and guidance in the application of comprehension, vocabulary, and study skills to reading in the various subject matter or content fields of the curriculum. Most of the material in basal reading textbooks or in special series is of a narrative type, with occasional nonfiction selections for the upper grades. This material is usually well designed and suitable for instruction in the designated skills being taught.

However, most of the reading children do in school, as well as outside the classroom, will be in material of a somewhat diverse nature. Instruction and guidance should be provided in applying the skills taught in the basic program and in adjusting to the nature of material used in the content fields. Each academic discipline has its own way of reporting on the events and phenomena unique to it. Even when adapting material for elementary school use, science writers must employ the vocabulary, the sequence, the approach, and the discipline of science. Social studies writers use the style appropriate to their field. These materials must then be read in a way consistent with the philosophy and approach of the discipline. The reader must attempt to think, comprehend, and transmit information in the vocabulary style that is relevant to the subject matter, whether it is geography, history, mathematics, or poetry.

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[11] Robinson, Francis P. *Effective reading*. Elmsford. Harper Row. Ch. 2. 1962

There is an important need to adjust the reading ability to the particular demands of the material to be read. It is necessary for a good reading program to take into account the special reading demands that are made by the various segments of the elementary school curriculum. Science, mathematics, music, English, geography, history—each has a set of specific reading skills that must be mastered in order to assure mastery over the material to be learned. These skills should not be taught incidentally, but as a planned part of the basic reading program.

Mathematics. The task of the reader in using an elementary school arithmetic book is unique. The format of the book and of the page is different from anything else he uses—far different, for instance, from a page in his reading book. The vocabulary is technical and has specific meanings inherent to mathematics. Symbols, abstract signs, and abbreviations are frequent, as are diagrams and schematic drawings. Whenever a narrative is used, the purpose is different from that of any other reading. A unit similar to a paragraph is numbered and called a problem; it usually includes two or more sentences. This is to be comprehended in terms of a mathematical process. The process is carried out. Immediately, the material read can be forgotten while the reader goes on to the next unit. The reading of short units for a specific purpose and their immediate forgetting comprise unique characteristics of reading in mathematics.

There is much application of skills in the interpretation of pictorial and graphic material. Special attention is required for unique situations and new concepts. The ability to form a visual image of what one has read is an important comprehension skill to apply in mathematics. Picturing in one's mind the elements in a story problem can aid in identifying an appropriate solution. Visualizing the abstractions represented in notation is also very important.

The amount of reading done in mathematics material is small as compared with that in social studies content. However, that which is done is extremely important. It must be done slowly and carefully, with accuracy and precision.

Social studies. The format of the page in a social studies book is much like that of a reading book, particularly in the primary grades. However, the task of the reader in this type of material is quite different. In most reading books, when one story is completed the reader goes on to the next, which has little, if any, relation to the preceding one. In social studies, on the other hand, all material is interrelated and the reader is expected to remember most of the content and concepts not only throughout the book, but throughout his life! This places an entirely different responsibility on the reader, and most children need considerable guidance, first in selecting what to remember, and then in techniques to help them succeed.

Vocabulary presents another unique problem in social studies material. Even words in one's sight vocabulary may have a different meaning in the context of the social sciences. Many words encountered are new both in form and in meaning. Some are proper nouns—names of places and people—often of foreign derivation and frequently not in the pupil's listening or speaking vocabulary. Abstract terms are words or phrases for which there is no simple definition, certainly not in concrete terms. While many of these are repeated over and over in sufficiently varied ways so that understanding develops others are used only briefly and in limited context.

Frequent reference to pictorial and graphic material and particularly to maps poses another problem. The continuity of reading is disrupted if the reader refers to each figure or table as directed. The skills of interpreting this material are required to derive the information assumed. Locating specific information within the book may be difficult and, at best, will be time-consuming.

The nature of writing in this field is unique. Concepts of time and place are always difficult, especially for children; yet these are the essence of history and geography. Condensation of ideas and concepts and compactness of reporting make for difficult readability, yet there seems to be no way to avoid this if the uniqueness of the discipline is to be retained. Sentences are often long and complex in nature, since the ideas being presented are complex. Frequently, too, the topics being treated are controversial and emotionally loaded. Unlike science, where factual material can be presented precisely, the content in social studies, by its very nature, is often opinion or half-truth. Sometimes it is deliberate propaganda, perhaps misleading in logic and sampling, one-sided, broad and general, with cause-and-effect relationships assumed without verification.

Reading in the social studies may often require locating additional information, using reference books, and reorganizing and synthesizing materials from several sources.

Children need much help and understanding as they struggle with comprehension, vocabulary load, and organizational problems in the social studies.

Science. Science material in the elementary school program is of several types. The formal textbook in science has a style and format quite different from the basal reading book, although some are apparently intended to be used as reading books. There are several unique features of science writing. First is the technical vocabulary. Few scientific terms have accurate synonyms. Each term usually represents a specific phenomenon or concept and must be developed as such. Science is becoming more popular. It is presented frequently on television, radio, and in the press. Youngsters become familiar with many terms, particularly in the fields of space and missiles. On the other hand, they may be surprisingly uninformed, particularly in the areas of biology and earth science.

Science material is usually presented rather quickly and matter-of-factly—and is often based on the assumption that supporting facts are known and understood. This makes for reading demands quite different from those encountered in mathematics or literature.

The factual material of science often includes specialized charts, diagrams, and other graphic content. Ideas from these must be incorporated within children's general comprehension. The use of symbols and scientific abbreviations, formulas, and other special notations is characteristic of science writing.

Special attention may be needed in helping children read, interpret, and then perform experiments and demonstrations. This is a skill much like that developed in following directions, but with special interpretation regarding equipment and scientific method.

Much information of a scientific nature is rightly obtained by experimentation, observation, and demonstration, rather than by reading. Verification and testing is an important characteristic of the scientific disciplines.

Extensive science content is available in magazines and pamphlets. There are also numerous books on specific topics, such as identification books of flowers, birds, and insects. Each of these has special reading requirements different from those in the science textbook and in the reading book.

The nature of science itself is reflected in writing about it. The habit of demanding proof, of withholding judgment, of logical and sequential development of ideas, of precision and exactness—these are qualities of the scientific disciplines that must be understood if the reader is to comprehend science content. The reader of science must try to think in the manner of the scientist.

Literature. Much of the material used in basal reading books designed for instructional purposes is of a literary type; that is, the short story format, with characters and plot, is used. This is considered easier for children to read and understand, since they can identify characters and action with their own experience. However, this material is neither designed, nor should it be used, as literature in the classical sense of the term. It is meant to be used as an instructional tool. Learning to read in the field of literature—stories, poetry, or drama—requires just as much special attention and guidance as in the fields of mathematics or social studies. Literature has been defined as the expression of life experience in all its aspects. At a minimum, it is reading matter of superior literary quality. *Classical literature* is that which has stood the test of time and is regarded as of high excellence. However, literature included in the elementary school curriculum should not be limited to the classical.

The approach of the reader to literary material is characterized by expectations of adventure, emotional involvement, beauty or artistry, enhanced understanding of life situations, meeting people, entertainment, challenge of ideas, perhaps fun, and enjoyment. Hence, while comprehension skills are involved, one often is more concerned with what the author really intends by what he says than by the literal meaning. Reading literary content should stimulate the imagination and provide the reader with insights to people and situations. As short stories, novels, plays, and biographies are read, the reader meets characters in various settings and follows the characters in their development. Sometimes he identifies with one of the characters or recognizes him as similar to a person he already knows. The author's direct involvement of the reader's emotions and imagination is unique to literary writing. The elementary school youngster should be prepared for this experience and helped to appreciate it.

In essays a central theme is developed, perhaps without a plot or character. Nonetheless, the reader again becomes involved in the author's mood, sensing his intent and purpose, whether formal, logical, or even pedantic, or informal, humorous, and perhaps satirical. This is the kind of material found in magazines, in editorials and syndicated columns in newspapers, as well as in books.

Poetry requires special attention, too, though great care must be exercised in its discussion. Elementary school youngsters find a strong appeal in the rhythm and sound of poetry. Much of it should be presented orally to give all children many opportunities to listen and to read it aloud. Poetry ranges in length from the couplet to book length. It may be narrative, or not. Its meaning may be obvious, or obscure and implied. It may appeal to a variety of emotions. Elementary school children should be given guidance in reading poetry of various sorts. Vocabulary and comprehension skills need to be adapted and adjusted in unique ways, when applied to truly literary material.

In summary, special provision must be made in the instructional program for helping children adapt vocabulary skills, comprehension skills, and general-study skills to the specific characteristics of reading in the various content areas of the elementary school curriculum.

Using Time and Personal Resources

In addition to knowing how to locate material about a topic, a problem, or an interest, the skilled reader knows how to plan his own resources and time for accomplishing the task at hand. Hence, knowledge about one's own habits of work, one's reading skills and facility, and the ability to use these to best advantage, make the truly independent and competent reader. Instruction in the use of time and personal resources should be provided in the basic reading program.

Estimating time. Even in the primary grades, children can be given guidance in estimating the amount of time it will take to accomplish various types of reading activities. The youngster who procrastinates, who finds it difficult to begin a task, may be given help in working out for himself an orderly procedure for beginning a reading task. The pupil who hurries through a reading activity without attention to detail or clarity of purpose may need assistance in analyzing and using more effective procedures. The overly methodical and conscientious youngster may need guidance in selecting those things which should be cut short, in being realistic about expectations, and so on. Each pupil throughout the elementary school should be showing definite improvement in the way he accomplishes a reading task; in his ability to estimate what he will need in time, effort, and resources; in the procedures he uses to identify a problem involving reading skills; and in his competency to achieve appropriate solutions. Partly through maturity, but more efficiently if given instruction, each pupil will increase the span of attention he can give to a topic, will improve his persistence of attack, and will establish the habits of concentration and singleness of purpose.

In the classroom of the elementary school, it is possible to provide many opportunities for children to develop habits of independence, persistence, and attention to a problem to be solved. However, unless planned in the instructional program, these are not likely to develop automatically.

Adjusting rate of comprehension to purpose. A rate of reading roughly 200 to 300 words per minute is considered normal for mature readers of high school level. This is often attained by competent upper grade pupils in the elementary school. This is only an average, however, and does not take into account the difficulty of material or the purpose of reading. Without doubt, most adults and many youngsters could perform many reading tasks considerably faster than they do.

Judicious use of skimming, clearer identification of the problem, and a better statement of purpose would improve the rate at which much reading could function. On the other hand, in some situations, printed matter should be read more slowly and thoroughly.

Speed is certainly not the most important criterion for success in reading. However, the slow reader tends to be overwhelmed by the extent of the task, to become discouraged, to dislike reading, and to find it dull and boring when action moves so slowly.

A reasonable adjustment of speed to purpose is a most important characteristic of the good reader. He should be flexible enough to adjust his rate to the task at hand, to the material being used, and to his own knowledge and interest in the topic or selection.

Rate of comprehension is closely allied to rate of thinking. Familiarity of material, level of abstractness, and degree of complexity all influence the rate at which one can read with understanding.

Each person's expectations should accord reasonably with his own general ability, the nature of the task, and the difficulty of the material.

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Chapter 4

ORAL READING SKILLS

While few adults spend much time reading aloud, those times when they do so carry a disproportionate importance. The reading is to an audience, and listeners are notoriously critical of poor oral reading. In practically all radio and television communication, the speaker is reading—sometimes much too obviously. Even a treasurer's report to a club, when stumblingly read, is embarrassing to all. Of course, too much stress upon oral reading at the expense of instruction in the study skills may slow the reader and handicap the acquisition of proficiency in silent reading. But so, too, relative inattention to oral reading through the later grades can prove a handicap. The speaker is likely to read much too rapidly and without expression. Oral and silent reading skills are related to each other but are distinctly separate abilities. Both should be started almost from the beginning and continued throughout the program. At all levels in the elementary school, oral reading should have a planned, systematic place in the reading program.

In the Instructional Program

Oral reading has a place in the diagnosis and evaluation of a beginner's reading skills, habits, and competencies. One way a teacher can be sure that a child associates the correct spoken word with the printed symbol is to have him read it aloud. In the initial stages of reading, it is most important that this process be assured. Consequently, oral reading is used in beginning reading as a device to check ability in word recognition.

With more mature readers, one can also note the attack the pupil makes on a word he does not know. Does he block and simply wait, does he skip the word, or does he apply structural or phonetic analysis techniques? Is he systematic in attack? For example, does he proceed from left to right, with a pattern of attempts? Does he seem to guess without any pattern or detectable approach? Does he insist on contextual meaning, or does he accept any sound he derives?

Reading aloud is also helpful in checking on comprehension. The interpretation a child puts on the way a character said a given line, for instance, can reveal, in some cases, whether he did in fact understand the point of the selection. However, a pupil can read aloud relatively smoothly and still not comprehend or understand.

Teachers should make note in conferences with individual children of such poor reading techniques as omission of words, inserting or substituting words, skipping lines, repeating words, phrases, lines, even paragraphs. Sometimes these habits are used in both oral and silent reading. Hearing them can help the teacher plan appropriate remedial work for the pupils having these problems.

Oral reading, if well done, may improve some skills that are important to silent reading. The novice says words slowly, one at a time, as each is perceived. This "word reading" produces an unpleasant effect, often noted in children's reading. The skillful reader perceives words in advance of the words he is saying; he possesses an "eye-voice span" of several words. A pupil should learn to read ahead rapidly during pauses between phrases. Then, when he reads the saved-up words at about two words a second, he sounds as if he were reading more rapidly; he reads with good expression and phrasing. Somehow the eye takes in the words, and the pupil can say the words as he looks at the audience. The pupil's eye-voice span is larger in material with which he is very familiar, and increases as he gains maturity and experience. The device of trying deliberately to look at his audience as much as possible while reading aloud has the advantage of forcing the pupil to take-in as much as possible each time he looks at the printed page, so that he will not lose audience eye contact. This, if transferred to silent reading, will also increase the silent reading eye span, and since one does not then pause to repeat the words orally, the speed is considerably greater.

In some types of material, oral reading has the added advantage of helping in the improvement of comprehension. When reading content is difficult, either because the words themselves are hard or because the concepts are difficult or abstract, one finds that rereading aloud increases the understanding. Children often do this. In fact, beginning readers may want to read all material aloud, apparently for this reason. Children's long preschool association with the spoken word, when compared with their limited experience with written words, makes oral reading the logical approach to the entire reading situation. Associating written words with speech makes reading more real for most children. On the other hand, oral reading is obviously slow and inefficient. In the middle and upper grades, children should be given experience and guidance in deliberately reading aloud as an aid to comprehension. When a child uses this technique excessively, however, it may indicate that the material he is reading is too difficult.

Without doubt, children in the elementary school, particularly in the primary grades, enjoy reading aloud. They look forward to the opportunity and vie for the chance. If well planned, reading aloud is a powerful motivational device, increasing interest and enthusiasm for the reading process. On the other hand, it is time-consuming. As a diagnostic device in the formal instructional program, its use should decrease rapidly during the primary grades. By the third-grade level, a limited and judicious use of oral reading in short, well chosen excerpts from the basal material should be sufficient.

In Audience Situations

The most common use for oral reading, both in school and out, is reading to an audience. The purposes vary widely. The reason for the reading, however, sets the purpose for the listening. Through listening, those in the audience receive some information, knowledge, pleasure, or other advantage. For instance, an announcement or notice is read, direction given, information about a topic presented, an exciting story enjoyed. The style of reading should be flexible, to ensure a communication consonant with the purpose and content. If an audience is assumed, the task of the reader is to read the material in the most effective and interesting way possible. Hence, preparation is essential to ensure command of the words, understanding of the message, and adequate interpretation.

Oral reading is a process of oral communication. The reader shares something from the printed page with an audience that, for one reason or another, is not viewing the same printed page. Having one person read while others follow the manuscript is not an audience situation; in fact, it is a harmful practice. The one reading aloud has no compulsion to communicate well, since he knows that the others have access to the same content. His quality of reading deteriorates. In turn, the others have no purpose in listening, except perhaps the one of seeking errors rather than ideas. If the listeners do perform conscientiously, they are forced to "read" at a pace much slower than that normal for their silent reading, as they attempt to keep step with the oral rate of another. Most readers will comprehend the printed symbols much more rapidly and efficiently silently than they will by listening.

Oral reading for an audience can be done in a number of meaningful and interesting ways. Typically, a pupil reads to others in the group. This may be to the whole class, to a small group of youngsters interested in the same topic, to children on another grade level, or before assemblies. In this type of reading, the individual is responsible for the selection, for interpreting it to his audience, and for the communication process. He will need opportunity to practice both silently and orally so that he can appear before the audience with the best possible effectiveness. Reading one's own creative efforts in writing poems, stories, or jokes is particularly satisfying. At other times, several people participate together in oral reading. A common situation is the reading of a play or a radio script, or in enacting a dramatic presentation of a story. Parts are read, sometimes with an interlocutor reading the nonconversational part of the selection. Preparation for this activity requires not only skill in reading one's part, but also co-operation with the group and attention to the parts being read by others, so that one may take his turn in a smooth orderly sequence. This requires opportunity to practice with the group and is usually carried out by individual preparation of one's own part.

In another situation, often used in elementary schools, youngsters participate with the group in a chorus, as in choral reading or voice choir. This requires the ability to read the material, as well as to follow the director and blend one's voice with others in the same rhythm, cadence, expression, and interpretation. Many variations of this type of oral reading are possible. In some cases, the performance becomes highly technical and semiprofessional in character. This requires considerable practice and group discipline.

Oral reading before an audience may range from the very formal to quite informal situations. The degree of formality determines, at least to some extent, the amount of preparation and the level of precision attempted. In the elementary school, formal large-audience situations will not occur frequently. More of the oral reading will be done in audience situations within the classroom or among class groups. Pupils should establish appropriate goals or standards of performance for the type of situation in which the reading is to be done.

Oral reading is a relatively time-consuming activity, and the opportunity will be limited for an individual pupil to read aloud to an audience of even his own class. However, children do enjoy oral reading, and it is a skill that needs practice. Hence, opportunity to read before a small group should be planned. Reading circles may be formed, with perhaps four to six children in a group. Turns to read before the circle may be taken and a regular schedule maintained. Those in the audience establish the purpose for listening and actively participate in the listening activity. Several reading circles in the classroom might be reading at the same time, if enough space is available so that noise does not interfere. Team reading between pairs of readers is an interesting and stimulating experience. The reading ability of the two team members need not be the same. This is a sharing process in which one reads to the other something he enjoys or wishes to share. Encouraging pupils to read aloud at home to their younger brothers and sisters is often helpful; upper-grade children might also read at school to those in younger grades.

In the Content Fields

Oral reading in the content fields should be used with discretion; it requires systematic, planned instruction. *The practice of having a child read aloud from a textbook while others in the class follow along can almost never be justified.* As previously indicated, it is extremely wasteful of time, develops poor oral reading habits on the part of those reading, tends to develop poor silent reading habits on the part of listeners, and cannot even be justified on the basis of developing good listening skills. The excuse that it increases learning by employing both eye and ear is fallacious; minds typically become bored and wander.

If it is deemed advisable for someone to read aloud the material in the social studies or science textbook, several procedures might be used. Probably the teacher should read the material while the class members (with closed books) are given systematic help in listening as a way of obtaining information. Selected pupils in the class may read the material, but they should prepare the material carefully beforehand. Members of the class should assume the listening role and gain this information by the use of good listening techniques.

Carefully directed oral reading can be used with profit in the content subjects. For instance, finding the sentence that answers a specific question and reading it aloud help to reinforce the learning and to check comprehension. Other members of the class listen and evaluate the context in relation to the question posed. Several members of the class may select different sentences in answer to the same question. As members listen to these being read, they can evaluate critically and compare the relevance and the precision of reply.

Occasionally excerpts may be read to prove a point or to justify a generalization, implication, or inference made from the reading. Sometimes one may read from another book information not contained in the material being read by most of the class. Reading the reports, summaries, and opinions that one has written is good practice.

Pupils should also have experience and instruction in selecting materials appropriate to being read aloud. In literature, for instance, some passages are very effective when read orally; others are not. Most material in science and social studies is intended to be read silently. It does not lend itself well to oral interpretation. Judicious selection of appropriate material to read aloud in each situation is another skill and is well worth learning.

In preparing materials to read to an audience, the pupil must pay attention to his habits of speech. Hence, good instruction in oral reading should contribute to the improvement of speech patterns. With a tape recorder, a child can play back his oral reading and literally "hear himself as others hear him." This can be very effective in pointing out speech irregularities that can easily be corrected. While this can be done with spoken material, the straightforward reading of prepared material, in some cases one's own, allows one to concentrate on the speech and reading involved, rather than on the phrasing of one's thoughts as one goes along. Care must be taken, of course, not to exaggerate speech sounds in the cause of clear enunciation and precise articulation. Children should be taught techniques to change or vary the emphasis, such as those of pace, pitch, voice quality, inflection, and the use of pauses, in addition to loudness. They can also practice interpreting punctuation marks.

These same techniques are used in the basal instructional groups in reading. Applying the skills taught systematically in the basal material of the instructional program to material in the content field provides practice in the skills, maintains the efficiency, and extends the use of the skills into the fields where they will have continued use.

The use of oral reading should be consistent with habits and practices being developed in the basal instructional program. Oral reading is basically a social experience. The youngster can have all the satisfactions of performing before a group, but he may also experience all of the accompanying fears and tensions. Hence, the development of skills in oral reading needs to be handled with considerable care.

Poise and self-assurance before a group can be developed. In contrast with impromptu speech, some children find that the security of being able to read the material frees them to concentrate on such things as posture, eye contact, and expression. Every child in the elementary school should become able to read appropriate material to others with a good command of himself and his voice. Instruction should be provided at the appropriate levels in voice production and control, eye contact, smoothness of phrasing, and other qualities.

Assurance grows when one shares with others something one thoroughly enjoys. Competence in the skills of oral reading gives one confidence in communicating the information, humor, and the beauty that one feels. Success in oral reading adds to one's poise and confidence. Oral reading has social, cultural, and educational values. Contact with an audience that listens purposefully and intently and to which one is successful in communicating is very gratifying.

Every opportunity should be used for children to do prepared oral reading in classroom situations. If well done, oral reading can enhance the entire reading process, making it more pleasurable and improving comprehension. It can add to the understanding and information available in the content fields. It contributes to effective speech, to poise, and to social confidence. If poorly done, it can be wasteful of time, boring, tedious, and a rather dreaded experience, which can interfere seriously with the development of effective reading and speech habits. Suitable materials should be provided, beyond those of the basal content.

Part II

The Guided Program for Individual and Personal Reading

Chapter 5

DEVELOPING THE HABIT OF PERSONAL READING

In the instructional program of the elementary school, all children should gain competence in the basic skills of reading commensurate with their ability to learn. In addition, however, each child should develop his own habits of reading appropriate to his ability, interests, potential, and background. During these years his appreciation, judgment, and discrimination develop and mature and, to a high degree, set the pattern of reading habits for the remainder of his life. Thus a major part of the reading program in the elementary school is to help each child develop his own individual plan of personal independent reading, coupled with a habit of using his time wisely for reading purposes, and a desire to participate in the act of reading at appropriate times and for appropriate purposes. Thus he may become an independent, versatile, and interested reader.

It is not uncommon to find children able to perform some of the skills of reading quite well, but who do not care to read. If reading is limited to the types of material and to the activities included in a basal instructional program, there is a serious danger that children will develop the attitude that reading is a chore, a duty, or something one does because it is necessary or "good for one," rather than an activity which has value, enjoyment, and satisfaction in and of itself. Children should learn to value the reading experience—the process of reading—so that they will want books and other reading material to be an important part of their lives.

Most children coming to school expect to learn to read and to participate in the reading process. They quickly learn that reading is a socially accepted activity and that it satisfies their curiosity and desire to know as nothing else can. However, the initial urge to read will not survive unless the child attains some degree of success and becomes sufficiently competent to be able to read fluently, focusing his attention upon ideas rather than upon the reading process.

Reading as a process satisfies some of the basic needs of children and adults. It satisfies the need to identify with a group, the need to know, the need to achieve, the need for security. Each child should learn to see himself as on a continuum of reading progress, developing more power and fluency in reading, and gaining an ever-increasing self-confidence both in his reading and in his ability to manage his activities independently. Reading as a process should lead to feelings of success and a confidence in one's ability to work independently in the world of ideas.

Only when a pupil is helped to select his own materials, to set his own pace, and to take responsibility for selecting or rejecting a book will he break free of the tendency to rely on the teacher for starting the reading process, and of the related habit of reading only that which is required.

In order to help all children develop the habit of personal and individual reading, it is essential that they have materials in sufficient quantity and variety. They need an adequate supply of trade books, serviced by trained librarians. This is basic to the reading program of the elementary school and is just as necessary as the collection of basal materials.

Furthermore, if the habit of personal reading is to be developed, time for this type of reading must be provided in the elementary school schedule. Within the total schedule, fully half as much time should be allotted for individual and personal reading as for the basic instruction.

This time for personal reading should be pleasurable and happy. Much of the material read will be freely selected by the student himself. Enjoyment of the process of reading should be fostered. The distinction should be made between enjoying the process of reading and enjoying the content. One does not enjoy or even like all of the things one reads; children should be helped to see this. The entire process of reading is not necessarily fun, nor should it be so considered. It is hard work mentally, and sometimes physically. Personal initiative and enterprise are needed and should be developed by each child as he sees the need for reading in relation to his varied interests. Children should learn early that reading has a variety of purposes and that ideas obtained from books can be used in many ways. Reading is much more than fun, escape, relaxation, or the mere passing of time.

Both the instructional and the individual reading programs should place a high priority on helping children enjoy reading. Children can learn to value each opportunity to read, to choose to read often rather than to regard it as a "last resort." All children should have the pleasure of contact with good books.

By the time he leaves the elementary school, each child should have developed a personal, individual plan of independent reading. He should know where and how to obtain reading material; how to use his free time to include a reasonable amount of reading; how to select books that give satisfaction and pleasure; and how to discover new books, new topics, and new sources of material. The program of individual and personal reading in the elementary school should be directed toward these ends.

Developing reading preferences and taste. As children become more competent and fluent readers and as their interests lead them to varied materials in many fields, they develop a sensitivity to form, style, and quality of writing. "Good taste implies power to discriminate among good, mediocre, and bad examples, to appreciate excellence, and to make suitable choices."[1]

It has been estimated that between the ages of 7 and 14 the typical child reads about 500 books. For most people, this is the period when they read the most and explore the widest range of interests. Therefore, it is especially important that during these years good materials are available in sufficient quantity and variety so that the time is not wasted.

This is the period when reading preferences and tastes are being established. Inevitably, with such wide and extensive exposure, children read much that is mediocre, even poor. The experience is not a total waste. Only as one has some contact with the inferior and mediocre in reading, as in all fields, can he develop discrimination and learn to select between the good and the bad. Even among professional critics, agreement is not complete regarding levels of taste. Nonetheless, throughout the elementary school, all pupils should be making progress at their own level and speed toward a more discriminating selection of good reading material and toward a preference for writing that is intellectually and emotionally true and artistically expressive of the language.

Many studies have been made of children's interests. In general, it is known that interests range widely among people and can shift quickly within any child. Interests of elementary school children tend to be vigorous, complex, and social; by high school the interests have become more restricted and less active.

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[1] Good, Carter V., ed. *Dictionary of education.* New York. McGraw. 1959

To a high degree, children's interests reflect their environment and are limited by their intellectual capacity and by the attitudes and customs of those with whom they live. Currently, the mass media of communication have considerable impact on children's interests. It may be that studies done prior to the advent of television no longer depict children's interests accurately.

Children of today want dramatic, vivid, and action-packed content; but they like informative material, especially science and history, as well as adventure. There is some evidence that modern children have interests more like those of adults than was previously true. Changes in the culture, the speed and pressures of modern living, and even changes in our language patterns make today's children quick to respond and impatient of the dull or mundane.

On the other hand, these very children often have great need for the qualities found only in the best of literary writing—books that, as Paul Hazard has said:

> **". . . offer to children an intuitive and direct way of knowledge, a simple beauty capable of being perceived immediately . . . books that awaken in them not maudlin sentimentality, but sensibility; that enable them to share in great human emotions; that give them respect for universal life . . . that teach them not to despise everything that is mysterious in creation and in man . . . books that contain a profound morality . . . that set in action truths worthy of lasting forever, and of inspiring one's whole inner life . . . books that have the integrity to perpetuate their own faith in truth and justice . . ."**[2]

Children find in books kinds of experiences they can get in no other way. It is important that during the impressionable and formative years of the elementary school period the teacher and the school librarian should be prepared to provide guidance and effective help in selection. Most children, even those who read fairly well, will profit from "enticement" into the discovery of books that lead to maturity in reading. Hanna and McAllister define three aspects of reading maturity as:

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[2] Hazard, Paul. *Books, children, and men.* Boston. Horn Book. 1944

"Knowledge—The mature reader is a person who is alert to new facts, who is stimulated by new ideas and whose curiosity about the world around him is alive and insatiable. . . . Constant evaluation of what is read is a part of the process of mature reading. Facts are sorted and placed in relation to what is known and are then accepted, rejected, or questioned in the light of past experience. Occasionally . . . a re-evaluation of what he knows and a new synthesis of ideas follows, and the mature reader is a wiser and a more mature person. . . .

"Self-Insight—The mature reader recognizes his assets and his limitations and sets his expectations accordingly . . . The mature person is not self-conscious about himself in this process of acquiring self-understanding . . . (W)ith a deeper understanding of his own roles in life and certainly with a truer empathy or identification of sympathetic feeling for other people in roles different from his . . . (he can) react in more rational ways toward similar situations and people in the future. Until one is able to act rationally even under the most highly emotionally charged circumstances, he is not truly a mature person. Books can help individuals build the understandings necessary to rational thinking and behaving.

"Social Conscience—An informed, emotionally secure reader . . . realizes that knowledge carries with it responsibility. To have knowledge and self-insight is not sufficient; it is imperative that both be put to use. (Social conscience) serves as a catalyst . . . or . . . the capstone. Until one reads with a sense of conscience as well as consciousness he remains gullible—(unable) to sense unfair generalizations, to recognize vicious stereotyping, or to appreciate a sincere sense of mission and fair play in an honest piece of reporting of conflict."[3]

While this is meant as guidance for youth and young adults, the elementary school teacher should provide guidance consistent with these long-range goals.

The teacher and librarian working with today's children find it more effective to start with the child and his special interests and needs. Knowing what each child needs or thinks he wants, the modern teacher must be prepared to help him find and select books that satisfy and appeal to him. New areas of interest, higher levels of quality, different types of material, and the various literary forms will not often be found by the youngster without guidance. Even the wide-ranging reader will tend to stay within his known limits.

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[3] Hanna, G. and McAllister, M. *Books, young people and reading guidance.* Elmsford. Harper Row. 1960. pp. 4-7

Children's interests can be determined in a number of ways: through observation and anecdotal records of conversations and dialogues revealing experiences of interest, through questionnaires, through personal interviews with each child, and through records of books read. Sometimes the task is to find a book that appeals to a child who has little inclination toward any sort of reading. Other times it is important to substitute a book of a higher quality on the topic of his current interest. Again, it may be desirable to broaden the interest of a child who has restricted himself to reading only on one topic, theme, or idea. Teachers and librarians thus work to extend the interests and improve the taste of individual students as well as of groups. Book displays are an effective device. Nothing is so likely to stimulate interest in reading as having a good book within easy reach. Book jackets, pictures from books, sketches, and diagrams can also be used for effective displays on bulletin boards.

Another worthwhile activity is talking about books. Many an adult is stimulated to read a book because a friend or acquaintance has been enthusiastic about it. A powerful motivation for young people is being able to contribute to the social group, as well as the satisfaction that comes from doing what others are doing and finding it enjoyable.

Reading aloud, both by teacher and pupils, is a popular activity. The appeal of the story hour is not limited to the primary grades. Good oral reading of all types of literary work should be encouraged.

Creative products such as pictures, plays, and puppets encourage and extend interest both for the creator and for others.

It is not sufficient to surround children with books. For best results, a teacher's systematic but understanding and sympathetic guidance is essential. Children of today spend proportionately less time reading, and it is highly desirable that the time they do spend be used profitably. Even those who read extensively tend to stay at a single level of quality unless guided and stimulated by teachers, parents, and librarians. Children do not have innate good taste; they do not necessarily choose good books in preference to mediocre, even when the choice is available. On the other hand, they apparently read as widely and as happily from collections of good books as from poor or mediocre ones. Hence, it seems especially important that collections in schools represent good literary quality. Children should have available to them books they do not know they want, as well as those they think or know they do want.

Chapter 6

CHOOSING READING MATERIALS AND PLANNING READING EXPERIENCES

No school can have an adequate or successful reading program without a balanced and relatively extensive collection of books of good quality. Choosing appropriate books, within the limitations of the budget, to meet the needs and demands of the school library collection is a technical process, primarily the responsibility of a qualified school librarian. However, it is very important that the teachers of each classroom work with the librarian, recommending books they have read which seem appropriate to the interests and needs of their pupils as well as those materials needed for units and topics of the curriculum.

The librarian has responsibility for the mechanics of maintaining a collection and of making it available for use in the most efficient way possible. Procedures will differ among schools, depending on facilities, personnel, and, to some extent, custom. The materials of the school collection should be made available to all children for full use. Children, as well as adults, tend to read the material that is most readily available. Choice of reading material seems largely a matter of chance—whatever happens to be at hand. Thus it is most important that what comes to the hand of the elementary school child be of quality and worth.

Schools have not met their obligation when they teach children merely how to read. Schools must also be responsible for guiding children in what they read beyond the textbooks of the classroom. For such guidance to be effective, it is essential that materials of many types be available and that children have help in planning or organizing their reading experiences, so that variety and balance are possible and that steady growth toward reading maturity can take place.

Current Materials—Newspapers, Magazines, Comics, Paperbacks

Surveys of adult reading usually indicate that a high proportion read only from newspapers and, occasionally, magazines. Yet the elementary school program has too often ignored these areas and consequently has not done much to help pupils develop desirable habits either of selection or of reading.

A reputable and substantial daily newspaper, preferably a morning edition, should be in every classroom of the elementary school. Teacher and pupils alike should read it and make reference to its material during the day. If different newspapers are selected in different classes, some exchange can take place, so that varying opinions and ways of presentation may be compared. Pupils will probably start with the easy-to-read material such as the comics and the reports of accidents or crime. However, with guidance and with the opportunity to discuss news stories, all children will make progress toward reading the more substantive parts of the newspaper. They should also practice efficient methods, such as skimming, use of index, selection according to headline, use of lead paragraphs, and so on. These study skills are presented in the basal instructional program but are best practiced in independent reading of this sort. Newspapers are not particularly designed for classroom use. However, several of the larger metropolitan newspapers do provide education supplements and special rates for schools. For instance, *The New York Times* publishes its regular edition at reduced rates for distribution to schools 5 days per week, including an abridged Sunday news supplement. Other newspapers will make similar arrangements if the volume is large enough to warrant it. There is no substitute for the daily newspaper. Its very timeliness cannot be replaced by any other medium. Children like to know about problems of everyday living, to understand the world about them. The newspaper is always interesting to children and should be a basic part of the reading program.

News magazines published for adults offer another excellent source of material for upper-grade pupils in the elementary school. Copies of the weekly news magazines are often available in school libraries. If copies are not available in the classrooms, time and opportunity should be given for reading them in the library. It is important to have access to several, so that different points of view and various styles of presentation may be studied. Other adult magazines of special interest to children should also be made available, at least in the school library and preferably in as many classrooms as possible. Several of these magazines are suggested in the appendix.[4]

In recent years, periodicals equivalent to adult news magazines have been published for mass distribution in schools. Notable among these are such publications as American Education Publications' My Weekly Reader, with editions for grades 1 through 12, and Scholastic Magazines publications, now available for grades 1 through 12. These are popular with teachers and pupils and should be used in the same way that weekly news magazines are read by adults; they are not a substitute for the daily newspaper.

In addition, several magazines are published especially for children. These are found in the homes of many school children and in most school libraries. Children differ widely in their acceptance and enjoyment of these magazines. It seems reasonable that all children should have access to them and become acquainted with each one's major features and style, so that when a given magazine answers a specific reading need, the pupil can select an appropriate source.

Adult magazines such as *Life*, *Look*, and *National Geographic* provide much excellent content of special and current interest to children. These should be available in the school library and may be loaned to classrooms or individual children.

Two other types of current, expendable, and relatively inexpensive resources must be considered when planning and choosing materials for children to read. These include the comics, as a special type of magazine, and paperbacks. Both are now available in many stores. For years, children of elementary school age have been buying and reading comics in vast quantities. There seems little doubt that this will continue. Their appeal, lying primarily in their availability, inexpensiveness, and easy reading, seems to affect almost all children at one time or another. For some children, they form almost the complete source of out-of-school reading. As with all mass media, their content and quality vary considerably, from near-pornography to fairly standard literary quality. In all cases, however, the heavy accompaniment of pictures means a relatively limited amount of wordage.

Children usually select their own comic books. Many choices are poorly made. It seems desirable to keep out of children's hands comics that emphasize extreme cruelty, sadism, sex, and contempt for justice or law, but unless children have some help in selection, they are likely to encounter many.

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[4] See appendix, pp. 120-121.

The problem is not so much to prevent children from reading comics as how to help them select wisely the ones they do read; and, even more important, how to help them enjoy other more worthwhile reading matter. In some cases their interest in topics treated in comics can be transferred to books or magazines of better quality.

The publication of paperback books, with their immense popularity, has for the first time made available to large numbers of Americans books formerly found only in libraries or bookstores. These books are being purchased in the hundreds of thousands, and among those buying them are many children and young people. Thus this material reflects and will greatly influence reading habits and standards. Criteria for selecting paperbacks are probably no different from those for selecting any other kind of book. However, since many of the early paperbacks featured crime, detectives, sadism, or sex, many people tend to view all paperbacks as mediocre. Publishers are still prone to highlight these features in their blurbs and covers. Hence, the buyers of paperbacks should be helped to look for known titles and authors, to consider reviews, and to make selections carefully.

The availability of these books has greatly increased the amount of peoples' reading. A book club sponsored by Scholastic Magazines (Arrow Book Club) offers paperbacks instead of hard-cover books. Whether this practice will spread is not known. Paperback displays do not conform to the rules of the usual library and the gaudy covers tend to be misleading. In general, paperbacks show a considerable potential for increasing and influencing the reading habits of children and adults. Teachers and librarians must consider this field with care and incorporate its best features within the reading program.

Classics–Traditional and Modern

Through the years, some books have come to be considered classics in the field of children's reading. There is no generally accepted list of such books, although there are many compilations reflecting the judgment and opinion of various people and organizations. In general, classics for children are those which have stood the test of time, which have high literary quality and universality of interest, and which frequently transmit important values of the culture. In many cases, the items are those for which an adult has a strong nostalgia. In helping children to acquire a common and integrating set of values and to establish high standards of literary quality, traditional classics are valuable but not unique. Since current writings and speeches contain reference to characters, situations, and themes of traditional classical literature, the pupil who knows each literary allusion is able to interpret the reference more easily. It is evident, however, that many of the so-called classics will never be read by more than a few rather exceptional children. On the other hand, every child should have easy access to the classics in attractive and readable format. Teachers will find it effective and stimulating to read aloud extensively from the classics, both as a way of acquainting all children with their literary heritage and as a way of opening up new horizons for those children able and ready to read these materials independently.

Since there is no generally accepted list of classics for elementary school children, it is recommended that, in each school, teachers and librarians work out a suitable list of suggested classics appropriate for several grade levels or, if preferred, a list suitable for use throughout the elementary years. Such a list should be only suggestive in nature; it can be used as a guide in making suggestions to children, as a purchase guide for parents, as a guide for summer reading, as a guide when purchasing books for the library collection (although buying should never be limited to the classics), and as a guide in selecting books to be read orally.

The traditional classics are important and should be made available to all children. Guidance when the child is able to read the classics with understanding increases the chance that he will become genuinely interested. Nonetheless, children should not be limited to the classics, nor should they be made to feel that this is the only respectable or accepted kind of reading. Classics have survived because they are good stories, because they are well written and because they reflect universal experiences. Today's children are as able to enjoy them as were the children of earlier times. On the other hand, the child of today has infinitely more to choose from than the youngster of even 25 years ago. He should be neither forced to, nor restricted from, the classics which form his cultural heritage.

Modern classics are even more difficult to define than are the traditional ones. Some would say that sales volume over a period of years is the criterion. Others rely on standards of literary quality, appeal to children, universality of interest, and so on. In any case, certain books are consistently popular with children throughout the years. These books should form a substantial part of the book collection in every school library. Reliance may be placed on certain book reviews and book lists, such as those compiled by the American Library Association, The National Council of the Teachers of English, *Publisher's Weekly*, The School Library Association, The New York State Education Department, and others. The Newberry and Caldecott Award books should be included in every collection, since they represent what have been considered the best in each year's production of children's books. These selections are made by a committee representing the Children's Library Association and so do not necessarily indicate children's choice. In retrospect, not all of these books have reached the status of modern classics, if judged either by sales or by popularity and appeal to children. On the other hand, they do represent what thoughtful adults tend to consider the best in literary and artistic merit for children. The teacher who has read these books will be able to guide individual children to those that meet their needs and appeal to their levels of maturity.

Abridgments and simplified texts. Some of the classic materials are now available in abridgments and simplified texts. These are attempts to make them more readable and thus more appealing to children. However, fundamental questions of taste and scholarship arise. Ideally, a book should be read completely in the style and way that the author wrote it. Some good abridgments are available, with responsible editors deleting competently and in good style. Some of the original books such as *Robinson Crusoe*, *Pilgrim's Progress*, *Leatherstocking Tales*, and *Gulliver's Travels* lend themselves well to shortening. In some cases, only scholars would read the original edition, and the concise shortened version is much more suitable, as well as more appealing and interesting to school children. However, *all* selections do not lend themselves to this type of revision and editing. Teachers often abridge selections when reading aloud. If this is done responsibly, it does not detract from the pleasure of the children. At all times the contribution the selection makes to the child's development, rather than the selection itself, should be the standard for the teacher's choice.

Simplified versions are quite a different matter. To change the language and style of the author, to simplify the words, and to modify the sentence structure interferes basically with the literary quality of the selection. If the book is too difficult or too advanced, it is probably better to wait until the child is old enough for it. In some cases, simplified versions do lead children to read the original; in other cases, they spoil the work for more mature reading.

Certain of the heroic tales, such as those of Shakespeare and the Arthurian cycle, are so much a part of the heritage that all children should have some contact with them. Simplified versions such as Lamb's *Tales of Shakespeare* have become almost classics in themselves and apparently have not detracted from later enjoyment of the originals. Children will more likely appreciate such examples of our literary heritage if the teacher reads them aloud in the original. Certainly there is plenty of other good material in print, so that the classics need not be distorted just to provide something for children to read.

During their elementary school years, it is desirable that all children read some of the literature that has come to be called classic. Even one good book may have considerable impact on a child, especially at an age when he is sensitive to impressions of many kinds. Such an experience can affect basically his standards of judgment and taste at a time when he is searching for values in human experience or for the truths by which people live. It is possible, of course, that arbitrarily requiring the reading of the classics, with an undue analysis of plot, characters, style, or theme, may defeat the very purpose for which these activities are designed. Too much analysis of a selection can result in a loss of the personal involvement that is the essence of all good literary work. Most of the instruction in analyzing selections for literary quality and insight should be done in the instructional program with material designed or selected to illustrate the various points. In general, the classic materials should be read independently under the sympathetic and understanding guidance of a professional teacher or trained librarian.

Trade Books—Fiction; Biography, Travel, and Personal Narrative; Poetry; Plays

It is estimated that over 1,000 new children's books are published each year. This number includes some reprints and new editions but is largely made up of new books, most of them written directly and deliberately for young readers. These are the *trade books*, those published for reading pleasure, as contrasted with textbooks and reference works.

Trade books for children are written about almost every conceivable theme. They are written at all levels of difficulty, and many are profusely illustrated. Most are individual books, though some are parts of a series. They include the same types of trade books as those designed for adult reading, differing primarily in that the material is deemed suitable for the abilities, interests, tastes, and developmental stages of children and youth.

Most of the trade books written for children can be categorized as *fiction*, since they have plot, characters, setting, and usually a theme. When selecting books for the school collection, the following criteria, adapted from *Books, Young People, and Reading Guidance*, by Hanna and McAllister,[5] provide points on which the teacher, as well as pupils, can analyze and evaluate books of fiction. In a well constructed plot (or plan of the story), actions or happenings of the characters follow naturally, easily, and realistically from one event to another. Decisions and actions result logically from the personalities of the characters. Sound characterization requires that problem, action, and solution stem from the personalities of the characters and the situations in which these characters find themselves. The setting (the where and when) is truthfully and honestly portrayed, or at least credibly and plausibly presented even when not an actual place or period of time. The theme is the story's main idea or subject, presented through the plot, setting, and characters. The author's attitude toward his theme and the way he develops it determine the quality. Good style demands that the author relate appropriately his characters, setting, theme, and plot. Style comes from the craftsmanship and the personality of the author and produces the "feel" or interaction between reader and author. For some children, fiction seems to be limited to types of adventure—mystery, western, suspense—or to love and romance. The appeal of this type of fiction seems universal. Quality ranges from sheer trash to highest literary style.

Biography, travel, and personal narratives, while nonfiction, are popular with upper elementary school children and for some are more satisfying than fiction because they are "true" stories, while having many of the appeals of the plot, characterization, and theme of fiction. Boys in particular find this type of book very satisfying. Somewhat the same criteria are used in analyzing and evaluating such a book; in addition, of course, is its ring of truth.

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[5] Hanna, G. and McAllister, M. *Books, young people, and reading guidance*. Elmsford. Harper Row. 1960. pp 4-7

Plays, as complete books or in collections, are not as readily available for children, just as they are less common than fiction for adults. However, if children are given guidance in reading plays within the instructional program, some suitable for their independent reading should be included in the book collection. Not all children will find pleasure or satisfaction from reading a play. This requires special skill, and probably only the more able and mature youngsters will choose to read a play independently. Yet there is sufficient literature in this medium so that it should be made a part of the collection and be easily accessible for those who find it satisfying. A few television and radio scripts are also becoming available for reading. This is a source that will probably increase during the years ahead.

Reading plays is a different process from listening to them or seeing them produced. Play-reading requires some understanding of the basic principles of staging. These concepts are often demonstrated even by young children when classroom plays of an informal nature are given. Children of today, moreover, see enough television and motion picture drama so that the technical terminology, such as "exit," "entrance," "up-stage," "stage center," and so on, can be rather easily understood. The pupil who has participated in creative dramatics should not have difficulty in understanding the directions for actions, for costuming, and even for stage sets.

Drama, more than any other literary type, is concerned with people doing something. A situation or an event is acted out as it might occur in life. The format of a play literally prevents an explanation of the event and a judgment of the characters. Thus the reader (viewer) can see what is done, hear what is said, and then must draw his own conclusions about what it all means.

The pupil who learns to read plays both silently and in oral "play-reading" groups has access to a fair amount of a type of literature that is unique and in some ways extremely satisfying. There seems no good reason to delay the reading of plays by interested youngsters.

Books of poetry should be included in every school collection. The school library should contain a variety of anthologies, as well as selections from the works of individual poets. Every teacher should have as a part of the permanent classroom collection at least one good anthology of poetry suitable for use with children. Poetry, more than any other kind of writing, cannot be "graded." It is appropriate whenever it meets the spirit of the situation and appeals to the mood or emotions of the occasion, whether written for children or for adults.

Much of the appeal of poetry comes from hearing it read aloud. Teachers at all grade levels in the elementary school should be skilled in reading poetry well and should be alert to opportunity when poems sincerely liked by the teacher can be shared with children. These occasions should occur frequently, but overemphasizing the formal "poetry lesson," particularly if the poem is overanalyzed or if it is used to "improve the character" of boys and girls, can result in its rejection.

Silent reading of poetry is difficult for children (and for adults as well). Thus, most children first need to hear poetry read aloud. However, after poems have been heard and enjoyed, many youngsters will want to read them independently.

Traditional poetry—Mother Goose, the nursery rhymes, the Psalms, the epic poems, and much from the 18th and 19th century poets—is commonly available in anthologies. Some children respond especially well to modern poetry, and works by modern poets should be included in every collection. Leland Jacobs[6] suggests that children should have the opportunity to be acquainted with the following poets:

Dorothy Aldis
Mary Austin
Harry Behn
Rosemary and Stephen Benét
William Blake
Margaret Wise Brown
Lewis Carroll
Marchette Chute
Joan Ciardi
Elizabeth Coatsworth
Walter De LaMare
Paul Lawrence Dunbar
Ivy O. Eastwich
Eleanor Farjeon
Eugene Field
Rachel Field
Aileen Fisher
Frances Frost
Rose Fyleman
Edward Lear
Vachel Lindsay
Myra Cohn Livingston
A. A. Milne
Laura E. Richards
James Whitcomb Riley
Elizabeth Madox Roberts
Christina Rossetti
Carl Sandburg
Robert Louis Stevenson
James S. Tippett
Winifred Welles
Annette Wynne

Easy-to-read books are a relatively recent innovation among trade book publishers. Designed to provide reading of a pleasurable sort for the pupil unskilled in reading, the slow reader, or the retarded child, these books have been very successful and are now being produced in quantity. Often, they are written with a limited vocabulary. Some are designed to meet the interests of beginning independent readers, while others are meant for the older child who is unable to read at a level commensurate with his interests. The quality of books of this sort varies considerably. It is rare for even an experienced professional author to write a good literary production about a given topic with limited vocabulary and simplified sentence structure. Teachers and librarians are urged to select these books with care. Some of them, however, should be available in every collection for the pupil who needs "easy books for speed reading" or "high-interest-easy-to-read books."

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[6] Jacobs, Leland B. *Literature with children.* Washington, D. C. Association for Children Education. International. 1961

Books of Information

Children in the elementary school like to read books containing information about topics in which they are interested. For the young child, in fact, reading satisfies the need to know, to investigate, to explore, to find out "why." For children who find difficult the abstract ideas, the imagery, and the inactivity of reading, factual material is sometimes more satisfying than other types. Good books of information and fact may be skillfully written, with as much attention to beauty, imaginative expression, and artistry as are the literary types of materials. No one can say that informational books are of any more value to the child than other kinds, but good books of knowledge, well written, with tact and moderation, satisfy basic needs of children and should be a substantial part of every elementary school book collection.

Factual books should be authoritative, accurate, up-to-date, honest, and unbiased. Facts should be stated as facts and explained in reasonable terms that children can understand. Boys and girls tend to like books that tell about modern inventions, daring and success in human affairs, facts presented with respect for universal life, and the mysterious as well as the known.

Some books of information present knowledge as organized in the major fields man has studied—history, geography, science, music, art, and so on. Children of today are reading great amounts of informational books about history, stimulated partly by the popularity of television westerns and partly by the events of World War II. Books of prehistoric times are also popular. Dinosaurs, early mammals, prehistoric man, all hold a fascination for children.

Science, particularly that of outer space, has also been very popular. Well written science fiction, while not strictly factual, frequently has a good deal of sound science information as its base.

Books of information also present material organized in terms of practical application—books about hobbies, sports, professions, and recently the "how-to" books, the "all-about" books, and other compilations of related factual materials. Using books of information like these requires the application of the study skills, as well as those of general comprehension. Here the reader must often refer to the index or to the table of contents to locate the specific information he wants. This is the kind of book in which the reader selects those parts which are relevant to the topic and often skips other parts. Skimming is used extensively.

Reports, essays, reproduced speeches, and similar factual-type material will also be part of the reading experience of the elementary school child, although in less quantity than in high school. This is the type of material liked by the able, wide-reading youngster. Frequently, this material is found in magazines or newspapers rather than in books, although a few collections of essays are available for elementary schools. Speeches such as the Gettysburg Address and excerpts from inaugurals and other historical events may be included in some books of information.

Classroom instruction in the content fields no longer depends on the use of a single textbook to satisfy the informational needs of today's youngster. Unit teaching, problem-solving approaches, and other modern methods of instruction require the extensive use of books of information, both for enriching the curriculum and for independent reading outside the requirements of the school program. It is most important that the school collection contain a wide variety of this type of book, so that children do not limit themselves to one or two standard reference books. Good as encyclopedias may be for bringing together general information about specific topics, they cannot substitute for wide reading among many sources of information.

Most pupils need some help and guidance in interpreting and organizing factual material. While books with deliberately biased opinions or points of view probably should not be selected for the school library collection, nonetheless children early encounter the differences in presentation made by different authors and the points that are inconsistent with their own experiences or with the views of another reporter. Elementary school children can begin to judge the elements of a controversial subject; to think and discuss what they have read, within the bounds of their limited experience and maturity.

Children, as well as adults, tend to read that which is easily accessible; if it has been read and discussed by some friends, it is more likely to be read. Teachers and librarians in the schools thus have an obligation and responsibility to make available to all children a wide range of reading materials. This will help each child to reach the stage of assimilative reading, where he can read with his mind centered on the interpretation and organization of ideas, where he can have many experiences in choosing reading materials that meet his needs.

At least 100 to 125 books are needed in each classroom for an independent reading activity to be carried out successfully. Others recommend at least 10 books per pupil, for adequate self-selection to be in operation. While no school is likely to have too many books, it should be remembered that exposure to too many at any one time can complicate a child's process of selection and that only a reasonable number of choices should be presented to each child. It is desirable to have a central library collection, so that classroom selections can be changed frequently.

In addition to providing materials, teachers and librarians must be able to give guidance in *what* children read as well as in *how* they read. Teachers are often surprised at the level of difficulty at which children are able to read independently. When the desire to know is strong enough, the child will read books and other printed materials well beyond his usual range. Television and current happenings have greatly extended the vocabulary and the interests of today's child. He is now able to read material that formerly he would have been unable to comprehend. Children should never be prevented from reading independently so-called difficult books. Stretching the mind and the reading skills should be encouraged. This can be done better with this type of material than with the conventional instructional books.

On the other hand, every teacher and librarian realize that there are some children whose personality and temperament are not suited to any prolonged time spent in reading. They are not able to give the high degree of concentration required, nor does the period of physical inactivity come easily. If, however, there is provision of an opportunity to select from wide resources and to share experiences with others, most children will find great satisfaction in the reading process. Each child should be helped to plan his own program in reading, to sample adequately, and then to select books to read on his own that will suit his purposes. Then he can read with the knowledge that he will be satisfied and that he can complete the process with competence as well as with pleasure.

Part III

Evaluation in the Reading Program

Chapter 7

EVALUATION IN THE READING PROGRAM

In reading, as in other parts of the school program, evaluation is an attempt to discover how well the objectives of instruction are being attained. The major aim of the reading program is to help each pupil become as efficient and diversified a reader as his capabilities will allow. Thus, each teacher must identify the elements of the reading process appropriate to the age and development of the pupils with whom he is working, then appraise each pupil's growth toward these goals, and adjust the instructional program accordingly.

Reading is complex and developmental in nature. There are many interrelated skills and abilities which are developed gradually and systematically during the elementary school program. One list of fundamental areas in reading instruction is included in the appendix.[1] This may serve as a basis for identifying skills and competencies to be appraised at regular intervals throughout the reading program.

If evaluation is made before the teaching of a new skill or competency, both teacher and pupil have a better picture of the pupil's present performance level, whether he is ready to take a new step, or whether he needs more help before proceeding. Much time is normally wasted in attempting to teach things which some children already know and for which some other children are not prepared. A testing-teaching-evaluating procedure is recommended as a continuous part of the process of teaching reading.

For best results, the pupil should be actively involved in the process of evaluation. He should know his own ability in the various aspects of the reading process; even more important, he should have knowledge of the progress he is making.

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[1] See appendix, page 122.

Interest in self-evaluation is high among most children. They are pleased to know about their own status, strengths, weaknesses, and progress. They can identify areas where adequate progress is being made and those other areas which are more difficult. To the degree that this can be stated in terms specific and meaningful for children, they will take responsibility for their own growth. The pupil who understands and accepts educational tasks as being useful and reasonable for himself has considerable motivation to improve. Self-evaluation need not involve undue competition with others in the group. Even the poorest reader can make some progress in some skill, even if it is only adding several words to his sight vocabulary. On the other hand, the remarkably good reader cannot rest on his laurels in comparison with the rest of the class, since he knows that the goals of the truly good and competent reader are never fully attained. There is always much more to be learned and infinitely more to be read.

Evaluating reading level. One of the first purposes for which teachers evaluate pupils in the reading program is to find their present status—the type of material which they can read comfortably for instructional purposes, their knowledge of work analysis techniques and study skills, their level of interest and appreciation, their reading habits, and so on.

In most classrooms of the elementary school, pupils will be grouped together in some manner and at some time for instructional purposes. Each teacher needs to evaluate the present status of children in the class, so that such small groups may be established for the most effective use of instructional time and resources.

Harris[2] suggests the use of a *class test on the basal reader:*

> ". . . try out the entire class on the basal reader intended for the middle group. A quick oral reading survey can be made. The books are distributed and the children are told that the purpose is to find out how hard this new book is. Each child will have a turn. Preparation is given as if the story were to be used instructionally. Then the teacher calls on the children, one after the other, to read two or three sentences each, out loud. If a child is reluctant to try, he is excused. If he stumbles over words or hesitates, he is immediately prompted. . . . Two half-hour periods, or at most three, usually provide enough time to cover the entire class in this way.
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> "In rating children on a brief sample like this, which is intended to give only a preliminary rough idea of the child's reading, a three-point rating scheme is sufficient: satisfactory, doubtful, and unsatis-

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[2] Harris, A. J. *Effective teaching of reading*. New York. McKay. 1962. pp. 119-120

> **factory. Unsatisfactory ratings should be given to those who are unwilling to try, and those who need to be helped with more than two or three words or who are slow, hesitant, and repetitious . . .**
>
> **"In grade three and up a silent reading test can be given the next day, using the following selection in the same basal reader. After a typical preparatory session with the whole class, the class reads ahead silently. When they finish the selection, they write answers to a set of comprehension questions, which can be dittoed or written on the chalkboard. As they read, the teacher notes which ones finish early and which are the slowest. Low comprehension scores and very slow reading show up additional children for whom this basal reader is probably too difficult.**
>
> **"The following day or two, the children tentatively chosen for the low group . . . are given similar oral and silent tests in an easier basal reader. . . . If that book also seems too hard for a few children, it is desirable to give each of them a more complete individual textbook test."**

The use of an informal reading inventory is recommended for all children about whom there seems doubt (and preferably for all youngsters in the class). The informal inventory is a device used to see how the individual pupil functions in the actual reading task. It appraises his reading of graded materials without comparing it with the performance of others. It is done by observing the pupil while he reads a series of graded selections at successively higher levels, until he reaches the point at which he can no longer function adequately.

Two similar selections of 100 to 200 words (50 at preprimer level) are chosen that are representative of the level of difficulty and appropriate for evaluating reading skills and abilities. Three steps are used: (1) silent reading of one selection; (2) oral reading at sight of the parallel selection; and (3) a test of comprehension following both. The test should check on comprehensive understanding, rather than on recall of specific facts. During the oral reading, the frequency and type of word recognition difficulties, hesitations, reversals, and interpretation of punctuation are noted. During silent reading, any tension behavior, such as finger pointing, lip movement, whispering, head and eye movement, facial expressions, or other evidences of reading difficulty can be observed. An individual summary sheet should be used for recording the results.

It is usually sound practice to start with a selection well below what the child can read comfortably. When any selection obviously is too difficult, it should be stopped before completion. Selections may be taken directly from the book, with the child reading from one copy while the teacher uses another for references, or the selections may be reproduced on cards and used as single items. A minimum of 15 minutes must be allowed for each child. More time is needed if a wide range of selections must be read. The inventory is administered to each child individually. He reads aloud, but this should never be done before one of his classmates. The classroom should be arranged so that the pupil can read the selections while other children in the room are doing independent activities not related to the inventory.

The following levels may be determined for each pupil: (1) Material at the *frustration level* is that which the child reads with great difficulty. He fails to recognize many of the words in the selection, his understandings are incomplete, out of order, inaccurate, and confused. He evidences signs of emotional tension and stress. (2) Material at the *instructional level* is that which the child misses not more than an average of one word in 20. He must be able to comprehend and recall most of the material read. With proper preparation in a teaching situation, he can read the material with understanding and pleasure. Material at the *independent level* is one or two grades below the instructional level of the child. He should read it smoothly, easily, with adequate speed and understanding, and with real pleasure. He should not miscall more than one or two words in every 100 running words.

Additional information may be obtained by reading aloud to the child the selections at or above the grade level where he attains frustration and checking on his comprehension of the material. Significant difference between reading and listening comprehension may indicate a youngster with serious reading difficulty who is achieving considerably less than his potential.

Many teachers will prefer to prepare their own inventories suitable for the basal materials to be used in the instructional program. Content, vocabulary, and language structure vary somewhat between series, so estimation of achievement levels may not be accurate from one reader to another. Administration of an informal inventory requires more professional competence and skill than does administering a standardized test. However, the results reveal considerably more information directly useful in providing the kinds of reading experiences needed by individual children. With practice, teachers can administer such an inventory efficiently and with adequate reliability.

Standardized reading tests also provide basic data for appraising the reading level of pupils. A list of some of the more commonly used tests is included in the appendix.[3] Typical standardized silent reading tests may measure a single phase of reading, such as vocabulary; or they may be tests of multiple functions, measuring several aspects such as vocabulary, comprehension, and rate in one instrument.

The standardized reading test is administered under prescribed conditions, with uniform directions for administration, time allotment, and scoring. Norms are provided so that the average and range of reading achievement of one group of children may be compared with another.

Caution must be exercised in interpreting these norms. Because of the nature of group tests and the derivation of norms, an individual score is not reliable for measuring individual pupil achievement. One cannot, for instance, automatically place a child attaining a given grade equivalent score on a test in a reader of the same grade designation. Tests are not typical of the usual reading situation; a given test is only a sample of one part of one's true reading ability. At best, tests measure only those skills included in the particular test, and these cannot always be assumed from the name of the test. Standardized tests available today do not include such measures of higher levels of reading performance as critical thinking, making inferences, comprehending relationships from long passages, sustaining attention over a long period, organizing content, and so on. Most current group-reading tests do not include a measure of oral reading ability, yet this is essential at the elementary level for a complete measure of reading competence and proficiency.

Standardized tests do not provide a differentiation between independent, instructional, and frustration levels of reading. Norms tend to be more accurate at the mean than at the extremes; they fail to give a true picture, particularly for the pupils who are significantly advanced or retarded for the grade level. Children at the lower end of the distribution often place above their actual level of instruction because of "informed" guessing based on familiarity with format or information already known. On the other hand, some children, those who have a slow rate of reading, who lack confidence in themselves or motivation even to guess well, will often be underestimated in their reading ability. In any event, *the test score is not reliable enough for individual placement in graded material.*

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[3] See appendix, page 124.

Test results should be interpreted within a rather wide range of "normality." Use of percentile ranks or stanines are preferred by many to grade equivalent norms, because they can be interpreted more easily and accurately.

Teacher judgment is a valuable and important kind of evaluation in the reading program. Teachers make a number of judgments based on day-by-day observations of children performing in the normal school situation. There is no substitute for such information obtained from a wide range of situations, where children are in natural, realistic, and relatively true-to-life situations. In fact, some of the more important aspects of reading achievement can be appraised best by observation: methods of attack on words, proportion of time spent on reading activities, oral reading skills, interest and attitude toward the reading act, techniques used in selecting a book to read independently, and so on.

Evidence does show, however, that teachers generally do not recognize the extent of individual differences in reading among their pupils. In order that these judgments may be as reliable as possible, it is recommended that each teacher work out specific objectives for children in a given class and then prepare check lists, rating sheets, and other devices to aid in a systematic appraisal of behavior that represents each pupil's status with regard to these competencies.

In addition to observation, data can be obtained in formal and informal testing situations. Questions relating to a story, for instance, can be carefully phrased so that they give information regarding the child's ability to comprehend. Sometimes these questions are presented orally; at other times they are on work sheets or on the chalkboard.

Activities provided in the workbooks which accompany basal readers, as well as in the work texts, can often be used for evaluation purposes, rather than for practice or study. In evaluating skills such as those needed in using reference books, performance and product evaluation techniques are useful. For instance, to check the ability to use a card catalog, a performance activity could be set up, such as "List the names of at least three books in our library that might give you information about baseball players."

Teacher judgment, even when made as precise as possible, will not be graded according to norms. Results are sometimes difficult to analyze. Experience is needed in order to compare performance and achievement of a given child with that of other children. However, teacher judgment is a vital part of evaluation. Every effort should be made to formulate this in accordance with the objectives, so that the time involved can be used efficiently and effectively. In daily person-to-person dealing with children, the trained professional judgment of the teacher provides information for appraisal of reading not possible to obtain in any other way.

Self-evaluation by individual pupils is also a very important part of the evaluation program in reading. Since reading is essentially an activity done alone and in silence by the individual involved, it is highly desirable that the child be cognizant of, and involved in his own evaluation of, his ability and performance as a reader. Even in the primary grades, children can be helped to analyze the reading act, to judge in which aspects they are doing well and in which things they need help or are making improvement. For instance, even at the first-grade level, a pupil can keep his own list of the words in his sight vocabulary; he can add to this list; he can know his own particular "demons"—the words especially hard for him. In addition to evaluating his own progress, he is usually motivated to compete with himself in increasing his skills.

Self-evaluation is also important in children's selection of reading materials and in helping them plan for themselves a balanced program of independent reading. Helping them establish the criteria for such a program is an important part of the learning process, for self-evaluation is essential in developing mature and independent readers able to continue beyond the requirements and restrictions of the school-sponsored program.

Diagnosing reading difficulties. When pupils are evaluated on reading performance, some children are not doing as well as might be expected. For various reasons, they are having difficulty in reading. Sometimes they are not achieving at the level of the others in the class, or they are achieving at a level lower than might be expected in relation to their other achievement or potential. In these cases, the need for more intensive diagnostic evaluation is evident. Standardized diagnostic tests in reading are available and should be used when the situation warrants. Diagnostic tests usually must be administered individually, although there are a few that can be used with small groups of children. Some are administered orally; others are primarily evaluations of silent reading. Standardized diagnostic tests are usually specific in nature, designed to appraise in detail some single aspect of the total reading process. Hence, they should be selected with care and interpreted in the light of their purpose. They are often designed to evaluate some aspects of vocabulary, word analysis, or the basic comprehension skills.

Teacher-constructed diagnostic devices are more flexible. When it is evident that a child is not reading as well as expected, one of the first things a teacher can check is his command of basic vocabulary. Inability to recognize at sight at least the 220 basic words will handicap any reader. It is helpful when asking a child to say his basic sight words to tell him to try "out loud" when he comes to a word he does not know. By analyzing his procedure, the teacher can diagnose some of his difficulties in word analysis, as well as failure in word recognition.

Knowledge of phonic and structural analysis can be quickly checked by a teacher-devised test based on material taught up to that point. Sometimes a page from the workbook may be used as the basis, or a sheet may be typed which includes the basic elements the child should know.

Often a child may read fairly adequately in general but may be weak in some skill or habit essential to developing his full potential. Some youngsters, for instance, tend to overemphasize one word-recognition skill, using it in situations where it is inappropriate or to the exclusion of all others. Key words may be missed, especially at the first-grade level. A child may learn to read extremely well when looking for details but be unable to grasp the main idea. If such weaknesses are not discovered and corrected, they may become more serious and eventually result in serious disability. Hence, it is important to carry on a continuous and diagnostic evaluation of all aspects of skills development, in order to detect danger signals and to provide appropriate reteaching or filling in.

Good teaching includes diagnosis in each lesson. As each new skill is presented, individual children are studied both for their readiness to learn the new skill and for their success in mastering it. Thus, each skill lesson becomes diagnostic, and individual difficulties or failures in perfecting given tasks are noted immediately. Preteaching or task adjustment is provided as needed. For youngsters in serious difficulty, the services of a clinically-trained diagnostician or reading specialist are strongly recommended. Most classroom teachers do not have the special training needed to diagnose cases of complex disability.

Evaluating progress and continuity in reading. Current understanding of the nature of reading indicates that it is not a unitary process. As each new skill is introduced, it should be related to previously learned skills and maintenance assured. New work at higher grade levels requires additional or refined reading competencies. Hence, there is a need for keeping records, for evaluating periodically on many aspects of reading, and for providing continuity among all pupils from grade to grade and from level to level of the school program. Standardized achievement batteries are commonly used to provide some measure of continued growth and progress in the basic subjects of the school curriculum. These batteries are usually administered once a year for middle- and upper-grade pupils; they also may be used for primary grades. Test results are used primarily to identify strengths and weaknesses in the academic program and to assure continuity of growth in all areas tested.

Though all standard achievement batteries include a subtest on reading, once again the limitations of group norms for individual interpretation must be kept in mind. While the mean and range attained by a group on the test battery are indicative of group progress, there is no assurance that any one individual within the group is progressing at the rate his test indicates. The standard error of measurement is too great. On the other hand, over a period of several years each pupil is probably making about the amount of progress indicated by his test scores. Anyone failing to show progress, or showing considerable regression, should be identified and given special attention in the form of further diagnostic testing or rigorous evaluation of performance. The scores on the reading section of the battery can also be compared with the other subtests for a comparative picture of the group's general achievement. Test scores from achievement batteries should not be used for individual pupil placement, for assignment to graded material for instruction, or for the awarding of marks or grades. Their major use is in evaluating the total school program and the relative place of the pupils within the total population, the school population, or the norm group, and in studying their year-to-year progression.

Cumulative pupil records should be established in the kindergarten or first grade. These provide for each pupil a record of his growth and progress throughout his school career. Ideally, these records should accompany a pupil when he changes schools or goes on to high school. There are many forms that a good cumulative record can take. Commercially prepared folders are available. Many schools prefer to design their own, appropriate to their local needs and curriculums. In any event, such record-keeping should provide a maximum amount of information in a relatively small amount of space, with relatively little writing. Care must be taken to include items that are educationally significant and to eliminate those irrelevant to educational progress, those highly subjective in nature, or those transitory and of little educational significance.

In the absence of a school-adopted cumulative record form, or to supplement a general one, teachers may design a checklist or guide sheet that itemizes many of the significant aspects of a child's reading performance at each grade level. This requires a continuing analysis of reading skills and competencies and a record of the materials used. Good principles of recording such data should include: conciseness of information, dating and signing of anecdotal and other subjective data, neatness and accuracy, and a well balanced collection of information on all aspects of reading. Notation should be made of data on test scores, reading levels, instructional materials used and their adequacy of coverage, and relevant data regarding such characteristics as age, mental ability, or any physical difficulties.

Individual reading records, compiled and kept by each child, should be a part of the evaluation program. This kind of reading record can be started in the early grades of the elementary school, even when the teacher or parent has to help in the recording of data. Records should include such information as the titles and publishers of books read, new words added to the vocabulary, records of performance in comprehension and word analysis, evidence of increasing facility in critical and creative reading, plans for well balanced independent reading programs, summer reading, and contact with magazines and newspapers. Self-evaluations, in which the child notes his difficulties, weaknesses, and successes, are also important. Further data for the record might be evidence of knowledge and practice in using reference books, library skills, and general study skills. The individual student should be a part of the evaluation process and be aware of his progress if he is to become a mature reader and to continue his growth in independence beyond the classroom.

The *report card* is a common method of reporting achievement and progress in reading as well as in all areas of the curriculum. It usually summarizes a pupil's work and becomes part of the permanent record of his competence and growth. There are any number of reporting systems, using a variety of marks or symbols. In almost all cases, however, the teacher is required to summarize, or average, a pupil's total reading progress. This is difficult at best. To the degree that the elements of the reading process can be identified and reported specifically, the report will be meaningful both to parents and to pupils. If pupils have participated in the evaluation and are aware of their performance at all points, they can readily interpret their marks. In any event, they will not be surprised. In many cases, illustrative material, detailed reports, and specific items can be used to supplement the concise and impersonal symbols. Conferences, demonstrations, and product analysis may also be effective. Pupils and parents should understand the symbol or symbols as a summary of a child's varied skills, competencies, abilities, and interests. In spite of its general nature, a mark should also indicate the progress a pupil is making. At the elementary school level, the greatest emphasis should be on a pupil competing with himself and showing continuous growth. With older children, having a comparison with others in the class is inevitable. Children should be helped to view this as objectively as possible and to accept realistically the performance level at which each can operate effectively.

Each pupil should always be assured that his teacher is helping him improve at the speed and in the direction that he can achieve. This assurance can only be achieved by a careful analysis in terms that he can understand.

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APPENDIX A

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APPENDIX B

Common Prefixes, Roots, and Suffixes[1]

Common Prefixes

Prefix	*Meaning*	*Examples*
a- (ab-)	from, away	avert, abnormal, absent
ad-	to, toward	adjust, admit, annex
ante-	before	antecedent, antedate
anti-	against, opposite	antithesis, antagonist
con- (co-, col-, com-)	together, with	concur, collect, combine
de-	from, down from	delegate, degrade
dis- (di)	apart, not	dispatch, dishonor
ex-	out of, from	exit, expel, exhume
fore-	front, in front, before, in advance	forefoot, foreground, foretell, foresee
in- (il-, im-, ir-)	into, not	inconsistent, impatient, illegible, irreverent
inter-	between	interpose, interrupt
mid-	in or near the middle of	midnight, midsummer
mis-	wrong, wrongly, bad	mislead, mischance, misspell, misunderstand
non-	not	nonalcoholic, nonentity
post-	after, behind	postpone, post-mortem
pre-	before	precede, prelude
pro-	for, forward, in front of	propose, program, prologue
re-	back, again	renew, reiterate, repress
sub-	under	subway, subnormal, subject
super-	over, above	supercilious, supernatural
trans-	beyond, across	transgress, transatlantic
un-	not	unkind, unnecessary

Common Roots

Root	*Meaning*	*Examples*
cap, cip, capt, cept	take	captive, precept, precipitate
dic, dict	say	dictate
duc	lead	conduct, aqueduct
fac, fic, fact, fect	make, do, cause	fact, fashion, difficult, perfect
fer	bear, produce, carry	fertile, refer
graph, gram	write, describe	graphic, diagram
log	idea, word, speech, study, reason, science, doctrine	logic, eulogy, biology
mitt, mit, miss, mise	let go, send	dismiss, missionary

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[1] Carter, Homer L. J., and McGinnis, Dorothy J. *Teaching individuals to read.* Boston. Heath. 1962. pp. 86–88

Common Roots (concluded)

Root	*Meaning*	*Examples*
pend	to hang	pendent, depend
plic, plect, plex, pli	fold, twist	duplicate, complicate, complex, pliable
pos	place, put	position
scrib, script	write	scribble, transcript
spec, spic, spect	look, examine	inspect, spectacle
sta, stat, stit, sist	stand	static, station, insist
ten, tin, tent	hold	tension, attention
ven, vent	come	venture, advent
vert, vers, vort, vors	turn	avert, vortex

Common Suffixes

Suffix	*Meaning*	*Examples*
-able, -ible	capable of being	serviceable, credible
-ace, -acy, -ancy, -ance	state of being	disturbance, intimacy
-al, -eal, -ial	relation to, that which, on account of	judicial, credentials elemental
-an, -ean, -ian	one who, relating to	American, statistician
-ant	*adj.*: being	resonant, vacant
	noun: one who	attendant, servant
-ary	*adj.*: relating to	residuary, contrary
	noun: one who, place where	dignitary, sanctuary
-ate	*adj.*: having quality	fortunate, desolate
	noun: one who	prelate, advocate
	verb: to make	celebrate, agitate
-dom	the office, realm or territory of	dukedom, earldom kingdom
	the state of being	freedom, wisdom
	all who are	officialdom
-ee	one who is object of action	trustee, employee, devotee
-en	little, made of	maiden, kitten, earthen, olden
-er, -or	a person or thing that	actor, baker, defender, elevator
	a person who lives in	cottager, islander
-ful	the amount that fills	cupful, handful
	full of, having much of	beautiful, fanciful
	giving, bringing or causing	healthful, painful
-hood	state, condition	motherhood, manhood
-ic	like, made of	plastic, magic
-ion	act, or state of being	coercion, fusion
-ist, -ite	one who	optimist, theist
-itis	inflammation of	appendicitis
-ity, -ty	state	unity, vicinity
-ive	relating to	legislative, decorative
-less	without	hopeless, worthless

Common Suffixes (concluded)

Suffix	*Meaning*	*Examples*
-like	resembling that of	doglike, homelike, lifelike
-ly	in a manner or way that	compactly, exactly, cowardly
	is like	queenly
	every	daily, yearly
-ment	state of being	amendment, development
-ness	the condition of being	darkness, goodness
-ose, -ous	abounding in	verbose, gracious
-ship	the state or condition of	friendship, relationship
	the office or position of	clerkship, professorship
	the art of	workmanship
	something made up of	membership, township
-some	full of	troublesome, quarrelsome
-ward	turning to, in direction of	heavenward, forward
-y	like, full of, tending to	bumpy, silky, sleepy
	somewhat rather	chilly
	the state of being	honesty, jealousy

Fourteen Master Words[2]

(Containing one or more of the elements found in 100,000 words)

Master Words	*Prefix*	*Common Meaning*	*Root*	*Common Meaning*
Precept	pre-	(before)	capere	(take, seize)
Detain	de-	(away, from)	tenere	(hold, have)
Intermittent	inter-	(between)	mittere	(send)
Offer	ob-	(against)	ferre	(bear, carry)
Insist	in-	(into)	stare	(stand)
Monograph	mono-	(alone, one)	graphein	(write)
Epilogue	epi-	(upon)	legein	(say, study of)
Aspect	ad-	(to, towards)	specere	(see)
Uncomplicated	un-	(not)	plicare	(fold)
	com-	(together with)		
Nonextended	non-	(not)	tendere	(stretch)
	ex-	(out of)		
Reproduction	re-	(back, again)	ducere	(lead)
	pro-	(forward)		
Indisposed	in-	(not)	ponere	(put, place)
	dis-	(apart from)		
Oversufficient	over-	(above)	facere	(make, do)
	sub-	(under)		
Mistranscribe	mis-	(wrong)	scribere	(write)
	trans-	(across, beyond)		

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[2] Smith, Henry P., and Dechant, Emerald V. *Psychology in teaching reading.* (c) 1961. By permission of Prentice-Hall. Englewood Cliffs, N. J.

APPENDIX C

Principles of Syllabication and Accents

In order to employ structural analysis adequately, the student must be skilled in syllabication. The following principles set forth by Carter and McGinnis[1] may serve as a reference guide for the teacher:

1. Generally, there are as many syllables in a word as there are vowels, except when two vowels are sounded as one or when the final e is silent.

   frog   float   take

2. If the first vowel sound in a word is followed by a single consonant, that consonant usually begins the second syllable.

   la dy   ba by

3. If, however, the accent is on the first syllable, the consonant following the vowel usually is included in the first syllable.

   pres i dent   Flor i da

4. If the first vowel sound in a word is followed by two consonants, the first syllable usually ends with the first of the two consonants.

   lad der   fol low

5. The syllables in a word do not often break between consonant blends or special two-letter consonant symbols.

   re ply   an gry   leath er

6. If the last syllable of a word ends in *le* preceded by a consonant, that consonant usually begins the last syllable.

   ta ble   la dle

7. In a word of more than one syllable the letter *v* is usually included with the preceding vowel to form a syllable.

   trav el   rav el

8. Prefixes and suffixes remain separate syllables.

   re pro duc tion   bi month ly

In addition to a knowledge of syllabication, an understanding of stress and accent is required. *Stress* is the prominence given to a word or syllable which makes it stand out from the adjoining words or syllables. The term *accent* is used to indicate stress given to syllables. The following general suggestions regarding accent should be understood.

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[1] Carter, Homer L. J., and McGinnis, Dorothy J. *Effective reading for college students*. New York. Dryden Press. 1957. pp 146–147. By permission

1. The first syllable in a two-syllable word is usually accented.

   ig′ loo prov′ erb

2. The root or stem of a word is usually stressed in the pronunciation.

   pro duc′ tion de scrip′ tive

3. In words ending in *tion* and *sion* the accent is placed on the next to the last syllable.

   or gan i za′ tion dem on stra′ tion

4. Words of two or three syllables usually are accented on the first syllable except when a prefix is used.

   qual′ i fy pre tend′

5. A word used as a noun frequently has a different accent when it is used as a verb or an adjective.

Noun	*Verb*	*Adjective*
sub′ ject	**subject′**	
con′ duct	**conduct′**	
reb′ el	**rebel′**	
ad′ dress	**address′**	
com′ pact		**compact′**
in′ valid		**inval′ id**
min′ ute		**minute′**
ab′ stract		**abstract′**

There are many ways in which teachers can aid their pupils in the development of skill in syllabication, pronunciation, and structural analysis. Such procedures as direct explanations, illustrations, games, work with compound words, and dictionary usage are a few examples.

APPENDIX D

Stages of Progress in Phonetic Analysis[1]

Types of words that can be attacked are shown at the left. Increasingly mature methods of analysis needed to study these words for clues to sound are shown at the right.

First stage

One-syllable words					that can be attacked by
	let	(pet)	sad	(sat)	using consonant substitution
add	hi	arm	pain	wake	using visual clues
end	me	her	sleet	these	to vowel sound
hit	by	bird	tie	slide	
bus	go	hurt	hoe	cube	

Second stage

Two-syllable words					that can be attacked by
		lad der	la dy	la dle	using visual clues
		slen der	me ter	peb ble	to syllabication
		tin der	ti ny	thim ble	and vowel sound
		mot to	mo tor	no ble	
cannon	nickel	ramble	explode	obtain	using visual clues
letter	jacket	eagle	parade	indeed	to accent and
furrow	buckle	bottle	provide	conceal	vowel sound
	regretted	competing	trumpeter		
	referring	refusal	traveling		
	allotted	promoted	pivoted		

Third stage

Multisyllabic words				that can be attacked by
medicine	opossum	represent	appendicitis	identifying patterns
accident	determine	pioneer	encyclopedia	of accent
confident	intelligent	interrupt	electromagnet	
moment	momentous	triumph	triumphal	noting that accent
symbol	symbolic	harmony	harmonious	may shift in
popular	popularity	excel	excellence	a derived form
-ion	*-ity*	*-ic* or *-ical*		using suffixes
definition	nationality	symbolic		as visual clues
repetition	popularity	scientific	*-ate*	to primary accent
information	originality	historical	domesticate	
			certificate	
-ian	*-ial*	*-ious*	obligate	
Bostonian	torrential	laborious		
vegetarian	official	malicious		
politician	equatorial	repetitious		

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[1] Gray, William S. *On their own in reading.* Fairlawn, N.J. Scott. 1960

Stages of Progress in Structural Analysis[2]

Types of words that can be analyzed are shown at the left. Increasingly mature methods of analysis needed to analyze the structure of these words are shown at the right.

First stage	**Simple inflected, compound, and derived forms of known roots**	**that can be analyzed by**
Inflected forms	He *walks* to school with his *friends*. The cat ate the *dog's* food. She *washes* the *dishes*. We were *playing* ball when Mother *called*.	identifying root words and inflectional endings as meaning units
Compounds	I lost my *raincoat* on the *playground*.	
Derived forms	It was a *rainy* day. She spoke *softly*. The *farmer* drove to town.	identifying root words and suffixes as meaning units
Inflected forms	bigger earliest baking	identifying the root in an inflected or derived form in which the spelling of the root changes
Derived forms	muddy busily driver	

Second stage	**Derived forms of known or unknown roots**	**that can be analyzed by**
	I was *unable* to *unlock* the door. It is *impossible* to cut the grass in an hour. A person who steals is *dishonest*.	identifying prefixes and root words as meaning units
	We *publish* books for children. (verb) I am a *publisher* of children's books. (noun)	recognizing the grammatical function of suffixes as an aid to meaning

Third stage	**More complex derived forms of words**	**that can be analyzed by**
"*negative*" *prefixes*	incomplete irregular illegal imperfect unconscious disapprove nonstop	identifying affixes in terms of meaning or function
noun-forming suffixes	interpreter translator darkness settlement suggestion performance existence growth	
colony:	colonial, precolonial, colonist, colonize, colonization	recognizing a root common to many derivatives in which pronunciation changes may occur
divide:	division, subdivision, divisible, indivisible, divisor	
	The *friendly* girl spoke *kindly* to the stranger. She works as an *assistant;* she is an *assistant* clerk. We watched the *rehearsal* of the *musical* comedy.	using position of words in sentences and word endings as clues to meaning

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[2] Gray, William S. *On their own in reading.* Fairlawn, N.J. Scott. 1960

APPENDIX E

A Guide to Pronunciation[1]

THE ALPHABET OF THE INTERNATIONAL PHONETIC ASSOCIATION (IPA)

The following symbols have each the sound values shown in the key words. The IPA symbols and words respelled with them are in square brackets [ ].

CONSONANTS

[p]	in	peep	[θ]	in	ether	[tʃ]	in	church
[b]	"	bib	[ð]	"	either	[dʒ]	"	judge
[m]	"	maim	[f]	"	fife	[r]	"	rear
[t]	"	toot	[v]	"	valve	[l]	"	lull
[d]	"	deed	[s]	"	cease	[h]	"	hail
[n]	"	noon	[z]	"	zones	[w]	"	wail
[k]	"	cook	[ʃ]	"	mission	[hw]	"	whale
[ɡ]	"	gig	[ʒ]	"	vision	[j]	"	you
[ŋ]	"	sing						

NOTE: For convenience in printing, the symbol [g] may be substituted for [ɡ].

VOWELS

[i]	in	beet
[ɪ]	"	sit
[e]	"	chaotic
[eɪ]	"	cave
[ɛ]	"	set
[æ]	"	sat
[ɑ]	"	father
[a]	"	ask as often pronounced in America (between [æ] and [ɑ]. See § 9)
[ɔ]	"	all, horse
[ɒ]	"	sorry as pronounced in England and often in America (between [ɑ] and [ɔ])
[o]	"	notation
[oʊ]	"	go
[ʊ]	"	pull
[u]	"	pool
[ʌ]	"	sun (used only in stressed syllables)
[ɜ]	in	bird as pronounced in southern England and parts of eastern and southern America (only in stressed syllables)
[ɝ]	"	bird as pronounced by the majority of Americans (only in stressed syllables)
[ɚ]	"	better as pronounced by the majority of Americans (only in unstressed syllables)
[ə]	in	sofa (only in unstressed syllables)

NOTE: [ɚ] is not a symbol of the IPA, which at present has no unambiguous symbol for the sound.

DIPHTHONGS

[aɪ] in ice	[aʊ] in house	[ɔɪ] in boy

[ɪu] in mute: the symbols [ju] are used when the first element is [j] as in use, instead of [ɪ]

NOTE: [eɪ] and [oʊ], given above, are also diphthongs, the usual sounds of "long a" and "long o" (see §§ 5, 69).

NON-ENGLISH CONSONANTS

[ç] = ch in German ich and Scottish heich "high" [hiːç], the voiceless palatal fricative (§ 60).

[x] = ch in German ach and Scottish loch [loːx], the voiceless velar fricative (§ 60).

NON-ENGLISH VOWELS

[y] in French pur, German fühlen, — the high-front-round vowel (§ 122).

[ø] " French creuse, German Goethe, — the mid-front-round vowel (§ 117).

[œ] " French seul, German können, — the low-front-round vowel (§ 117).

The symbols [l̩], [m̩], [n̩], [r̩] represent l, m, n, and r sounds that form syllables either alone or with nonsyllabic sounds; as [bæt'l̩, bæt'l̩d, kæz'm̩, kæz'm̩z, fæt'n̩, fæt'n̩d, bet'r̩, bet'r̩d].

The colon [ː] after a symbol indicates that its sound is long in duration as compared with that of the unmarked symbol. The raised period [·] may be used for intermediate length.

The sign [˔] after a vowel symbol (as [e˔]) indicates a pronunciation of it with slightly raised tongue; [˕] (as [e˕]), with slightly lowered tongue; [+] (as [o+]), with slightly advanced tongue; and [−] (as [e−]), with slightly retracted tongue.

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[1] By permission. From Webster's New Collegiate Diction ary, copyright 1961 by G. & C. Merriam Co., publishers of the Merriam Webster Dictionaries.

APPENDIX F[1]

Children's Magazines

American Childhood. Kindergarten and primary grades. 74 Park Ave., Springfield, Mass.

American Girl. Middle and upper grades. Girl Scouts of America, 830 Third Ave., New York

Boy's Life. Middle and upper grades. Boy Scouts of America, 2 Park Ave., New York

Child Life. Preschool and primary grades. 30 Federal St., Boston, Mass.

Children's Digest. Primary and middle grades. 52 Vanderbilt Ave., New York

Children's Play Mate Magazine. Primary and middle grades. 3025 East 75th St., Cleveland, Ohio

Humpty Dumpty's Magazine. Preschool and primary grades. Parents Institute, Inc., 52 Vanderbilt Ave., New York

Jack and Jill. Kindergarten to middle grades. Curtis Publishing Co., Independence Square, Philadelphia, Pa.

Junior Natural History Magazine. Middle and upper grades. American Museum of Natural History, New York

Model Airplane News. Middle and upper grades. 551 Fifth Ave., New York

Periodicals Published for Mass Distribution in Schools

My Weekly Reader. Editions for each grade, 1-6. Weekly. American Education Publications, Columbus, Ohio

Scholastic News Pilot, News Ranger, News Trails, News Explorer, News Time, and *Junior Scholastic.* Editions for grades 1 through 9. Weekly. Scholastic Magazines, 33 West 42nd St., New York

Current Events. Grades 6-8. Weekly. American Education Publications, Columbus, Ohio

Current Science and Aviation. Grades 7-12. Weekly. American Education Publications, Columbus 16, Ohio

Co-Ed. For homemaking classes, grades 7-12. Scholastic Magazines, 33 West 42nd St., New York

Read. Grades 6-9. Twice a month. American Education Publications, Columbus, Ohio

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[1] Harris, Albert J. *Effective teaching of reading.* New York. McKay. 1962

Adult Magazines of Special Interest to Children

Field and Stream
Life
Look
Mechanix Illustrated
National Geographic
Popular Mechanics

APPENDIX G

Fundamental Areas of Reading Instruction[1]

1. **Vocabulary development**

2. **Word-recognition techniques**
    - *a.* Meaning clues
    - *b.* Visual analysis
    - *c.* Phonetic knowledges
    - *d.* Visual and structural knowledges
    - *e.* Auditory and visual synthesis
    - *f.* Visual perception techniques

3. **Comprehension**
    - *a.* Basic comprehension
    - *b.* General level of comprehension
    - *c.* Reading to retain factual information
    - *d* Reading to organize
    - *e.* Reading to evaluate
    - *f.* Reading to interpret
    - *g.* Reading for appreciation

4. **Basic study skills**
    - *a.* Locating information
    - *b.* Using reference materials
    - *c.* Reading graphic and tabular materials
    - *d.* Organizing material
    - *e.* Skill in skimming

5. **Speed of comprehension**

6. **Oral reading**

7. **Reading in subject-matter fields**
    - *a.* Social studies
    - *b.* Arithmetic
    - *c.* Science
    - *d.* Literature

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[1] Bond, Guy L., and Wagner, Eva B. *Teaching the child to read.* New York. Macmillan. 1960. p. 327

8. Habits and attitudes
   - a. Establishing purposes for reading
   - b. Assuming independence
   - c. Demanding understanding of materials
   - d. Appraising critically
   - e. Being socially responsible
   - f. Enjoying books

9. Interests and tastes
   - a. Areas of interests
   - b. Intensity of interests
   - c. Quality of tastes

APPENDIX H

Selected List of Standardized Achievement Tests[1]

Name of test	Publisher [a]	Year of publication	Age or grade level [b]	Time required (minutes)	Recent review in Buros' M.M.Y. [c]
American School Achievement Tests	29	1958	I–IX	35–177	5–1
California Achievement Tests	8	1957	I–XIV	89–178	5–2
California Arithmetic Test	8	1957	I–XIV	39–78	5–468
California Basic Skills Tests	8	1954	IV–IX	120–152	5–3
California Language Test	8	1957	I–XIV	27–40	5–177
California Reading Test	8	1957	I–XIV	23–68	5–622
California Study Methods Survey	8	1958	VII–XIII	35–50	5–689
California Survey Series	8	1959	VII–XII	139–357	None
California Tests in Social and Related Sciences	8	1954	IV–XII	140–170	5–4
Comprehensive Primary Reading Scales	41	1956	I–III	Unspecified	None
Comprehensive Reading Scales	41	1948	IV–XII	60	None
Cooperative English Test, Mechanics and Effectiveness of Expression	12	1960	VII–XVI	40	5–179
Cooperative English Test, Reading Comprehension	12	1960	VII–XVI	40	5–645
Cooperative Mathematics Test for Grades 7, 8, and 9	12	1950	VII–IX	80	5–421
Cooperative Science Test for Grades 7, 8, and 9	12	1948	VII–IX	80	4–624
Cooperative Sequential Tests of Educational Progress (STEP)	12	1957	IV–XIV	35–70	5–24
Cooperative Social Studies Test for Grades 7, 8, and 9	12	1948	VII–IX	80	4–663
Cooperative Vocabulary Test	12	1949	VII–XVI	30	4–213
Coordinated Scales of Attainment	14	1947	I–VIII	90–256	4–8

Selected List of Standardized Tests[1] (concluded)

Name of test	Publisher [a]	Year of publication	Age or grade level [b]	Time required (minutes)	Recent review in Buros' M.M.Y.[c]
Developmental Reading Tests	23	1955	I–III	40	5–626, 669
Diagnostic Reading Tests; Section IV, Word Attack	10	1952	III–XIII	Unspecified	5–B102, B103
Diagnostic Reading Tests: Survey Section, Lower Level	10	1952	IV–VIII	120	5–B102, B103
Diagnostic Tests and Self-Helps in Arithmetic	8	1955	III–VIII	Unspecified	5–472
Diagnostic Tests of Achievement in Music	8	1950	IV–XII	20–60	4–226
Doren Diagnostic Reading Test of Word Recognition Skills	14	1956	I–IV	180	5–659
Durrell Analysis of Reading Difficulty	44	1937	I–VI	40–45	5–660
Durrell-Sullivan Reading Capacity and Achievement Tests	44	1945	II–VI	30–45	5–661
Gates Advanced Primary Reading Tests	7	1958	II–III	40	5–630
Gates Basic Reading Tests	7	1958	III–VIII	70	5–631
Gates Primary Reading Tests	7	1958	I–II	50	5–632
Gates Reading Diagnostic Tests, Revised Edition	7	1942	I–VIII	60–90	5–662
Gates Reading Survey for Grades 3 (Second Half) to 10	7	1958	III–X	44–46	5–633
Gates-Russell Spelling Diagnosis Test	7	1937	II–VI	Indefinite	4–200
Iowa Every-Pupil Tests of Basic Skills (SRA Edition)	30	1950	V–IX	273	4–15
Iowa Language Abilities Test	44	1948	IV–X	46–48	4–165
Iowa Tests of Basic Skills	19	1955	III–IX	279	5–16
Metropolitan Achievement Tests	44	1959	I–IX	105–255	4–18
Nelson-Lohmann Reading Tests	14	1953	IV–XIII	45	5–639
Primary Reading Profiles	19	1955	I–II	83	5–665
SRA Achievement Series	30	1958	I–IX	340–445	5–21
Stanford Achievement Test	44	1953	II–IX	82–213	5–25
Thorndike-Lorge Reading Test	7	1947	VII–IX	40	4–558

See also New York State Education Department *Reading Test for New York State Elementary Schools, Beginning Grade 3—Beginning Grade 6, Forms A and B.*

Selected List of Standardized Aptitude Tests

Name of test	Publisher [a]	Year of publication	Age or grade level [b]	Time required (minutes)	Recent review in Buros' M.M.Y.[c]
SCHOLASTIC APTITUDE TESTS					
California Short-Form Test of Mental Maturity	8	1957	Kgn–Adult	29–53	5–313
California Test of Mental Maturity	8	1957	Kgn–Adult	50–92	5–314
Chicago Tests of Primary Mental Abilities	30	1943	5–17	120–240	4–716
Columbia Mental Maturity Scale	44	1954	3–12	15–20	5–402
Cooperative School and College Ability Tests	12	1955	IV–XIV	70	5–322
Davis-Eells Games	44	1953	I–VI	60–120	5–326
Henmon-Nelson Tests of Mental Ability, Revised	19	1957	III–XII	30	5–342
Holtzinger-Crowder Uni-Factor Tests	44	1953	VII–XII	40.5	5–610
IPAT Culture-Free Intelligence Tests	20	1950	4–Adult	30	5–343
Kuhlmann-Anderson Intelligence Tests	36	1952	Kgn–XII	30–45	5–348
Kuhlmann-Finch Intelligence Tests	14	1951	I–XII	25–30	5–349
Lorge-Thorndike Intelligence Tests	19	1954	Kgn–XIII	20–34	5–350
Otis Quick-Scoring Mental Ability Tests	44	1953	I–College	25–30	5–361, 362
Otis Self-Administering Tests of Mental Ability	44	1928	IV-College	20–30	5–363
Pintner General Ability Tests: Non-Language Series	44	1945	IV–IX	50	3–256
Pintner General Ability Tests: Verbal Series	44	1946	Kgn–College	25–55	5–368
SRA Primary Mental Abilities Test	30	1949	5–17	45–60	5–614
SRA Tests of Educational Ability	30	1957	Kgn–XII	45–65	5–377
SRA Tests of General Ability	30	1959	Kgn–XII	35–45	None
Terman-McNemar Test of Mental Ability	44	1941	VII–XIII	40	4–324
TESTS OF OTHER APTITUDES					
American School Reading Readiness Test	29	1941	Kgn–I	Unspecified	5–675
Differential Aptitude Tests	28	1947	VIII–XII	186	5–605

Selected List of Standardized Aptitude Tests (concluded)

Name of test	Publisher [a]	Year of publication	Age or grade level [b]	Time required (minutes)	Recent review in Buros' M.M.Y. [c]
Gates Reading Readiness Tests	7	1939	Kgn–I	Unspecified	4–566
Graves Design Judgment Test	28	1943	VII–XVI; Adult	20–30	4–220
Harrison-Stroud Reading Readiness Profiles	19	1956	Kgn–I	80–90	5–677
Lee-Clark Reading Readiness Test	8	1951	Kgn–I	15	5–678
MacQuarrie Test for Mechanical Ability	8	1943	7 and over	20	4–759
The Meier Art Tests: I, Art Judgment	6	1940	VII–XII	45–60	4–224
Metropolitan Readiness Test	44	1950	Kgn–I	65–75	4–570
Minnesota Mechanical Assembly Test	36	1930	11 and over	17–21	3–671
Multiple Aptitude Tests	8	1959	VII–XIII	177	5–613
Musical Aptitude Test	8	1950	IV–X	40	5–250
Reading Aptitude Tests	19	1935	Kgn–I	40–55	3–519
Seashore Measures of Musical Talents, Revised Edition	28	1939	V–VIII; Adult	60–70	5–251
Tests in Fundamental Abilities of Visual Art	8	1927	III–Adult	85	40–1329

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[1] Ahmann, J. Stanley, Glock, Marvin D. & Wardeberg, Helen L. *Evaluating elementary school pupils.* Boston. Allyn. 1960.

[a] The number designating the publisher refers to page 128–129.

[b] Grade levels are given in Roman numerals.

[c] The number preceding the dash indicates the *Yearbook*; the number following the dash indicates the test entry.

Publishers and Distributors of Standardized Evaluation Instruments[1]

1. **American Chemical Society,** Committee on Examinations and Tests, Division of Chemical Education, St. Louis University, St. Louis, Mo.
2. **Acorn Publishing Company,** Rockville Centre, Long Island
3. **Association Press,** 291 Broadway, New York 7
4. **Bausch & Lomb Optical Company,** Rochester
5. **Bureau of Educational Measurements,** Kansas State Teachers College, Emporia, Kans.
6. **Bureau of Educational Research and Service,** State University of Iowa, Iowa City, Iowa
7. **Bureau of Publications,** Teachers College, Columbia University, 525 W. 120th Street, New York 27
8. **California Test Bureau,** 5916 Hollywood Boulevard, Los Angeles 28, Calif.
9. **Center for Psychological Service,** George Washington University, Washington, D. C.
10. **Committee on Diagnostic Reading Tests, Inc.,** Kingscote Apt. 3G, 419 W. 119th Street, New York 27
11. **Consulting Psychologists Press,** 270 Town and Country Village, Palo Alto, Calif.
12. **Cooperative Test Division, Educational Testing Service,** 20 Nassau Street, Princeton, N. J.
13. **Educational Records Bureau,** 21 Audubon Avenue, New York 32
14. **Educational Test Bureau,** 720 Washington Avenue SE, Minneapolis, Minn.
15. **Educational Testing Service,** 20 Nassau Street, Princeton, N. J.
16. **C. A. Gregory Company,** 345 Calhoun Street, Cincinnati 19, Ohio
17. **Harlow Publishing Corporation,** P. O. Box 1534, Oklahoma City, Okla.
18. **Harvard University Press,** 79 Garden Street, Cambridge 38, Mass.
19. **Houghton Mifflin Company,** 432 Park Avenue South, New York 16
20. **Institute for Personality and Ability Testing,** 1602 Coronado Drive, Champaign, Ill.
21. **Iowa State University Press,** Press Building, Ames, Iowa

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[1] Ahmann, J. Stanley, Glock, Marvin D. & Wardeberg, Helen L. *Evaluating elementary school pupils.* Boston. Allyn. 1960

22. **Keystone View Company,** Meadville, Pa.
23. **Lyons and Carnahan, Publishers,** 223-225 S. Main Street, Wilkes-Barre, Pa.
24. **C. H. Nevins Printing Company,** 1414 Brighton Road, Pittsburgh, Pa.
25. **Ohio Scholarship Tests,** State Department of Education, Columbus, Ohio
26. **Oliver & Boyd, Ltd.,** Tweeddale Court, High Street, Edinburgh, Scotland
27. **Personnel Evaluation Research Service,** Purdue Research Foundation, Division of Educational Reference, Purdue University, Lafayette, Ind.
28. **The Psychological Corporation,** 304 E. 45th Street, New York 17
29. **Public School Publishing Company,** 345 Calhoun Street, Cincinnati 19, Ohio
30. **Science Research Associates,** 57 W. Grand Avenue, Chicago 10, Ill.
31. **Sheridan Supply Company,** P. O. Box 837, Beverly Hills, Calif.
32. **Stanford University Press,** Stanford University, Palo Alto, Calif.
33. **State High School Testing Service for Indiana,** Purdue University, Lafayette, Ind.
34. **Steck Company,** Austin 1, Tex.
35. **Stereo Optical Company,** 3539 N. Kenton Avenue, Chicago, Ill.
36. **C. H. Stoelting Company,** 424 N. Homan Avenue, Chicago 24, Ill.
37. **University of Michigan, English Language Institute,** Ann Arbor, Mich.
38. **University of Minnesota Press,** 10 Nicholson Hall, Minneapolis 14, Minn.
39. **University of Nebraska Press,** 1125 R Street, Lincoln 8, Nebr.
40. **University of the State of New York,** State Education Department, Albany
41. **Van Wagenen Psycho-Educational Research Laboratories,** 4549 Bloomington Avenue, Minneapolis 7, Minn.
42. **Veterans' Testing Service of American Council on Education,** 6018 Ingleside Avenue, Chicago 37, Ill.
43. **Western Psychological Services,** 10655 Santa Monica Boulevard, Los Angeles, Calif.
44. **World Book Company,** Yonkers
45. **Zaner-Bloser Company,** 612 N. Park Street, Columbus 8, Ohio

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